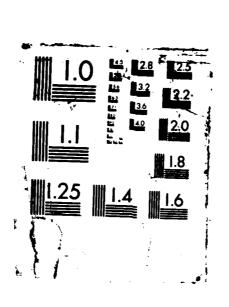
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## 20. ABSTRACT

This is the Soviet Laser Bibliography for May-June 1986, and is No. 83 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications systems; beam propagation; adaptive optics; computer technology; holography; laserinduced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.

#### INTRODUCTION

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is May-June 1986, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Soviet Reference Journals (journals of abstracts) are also included. Laser items from the popular or semipopular press are generally omitted. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library.

Since our computer is not now able to print between lines, superscripts and subscripts are indicated by (sup) and (sub).

We are producing the entire bibliography on computer. To make our bibliography compatible with other data bases, for source abbreviations, we use the letter codens generally used in our own government rather than transliterations of abbreviations used in the Soviet Union. Likewise, we use letter codens to designate affiliations. The authors' affiliations are indicated in parentheses after the authors' names in the text. Empty parentheses indicate that the affiliation was not given. A source abbreviations list, authors' affiliations list, and author index are included in the back of the bibliography.

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### I. BASIC RESEARCH

### A. SOLID STATE LASERS

# 1. Crystal

a. Miscellaneous

- Abdulsabirov, R.Yu.; Dubinskiy, M.A.; Korableva, S.L.; Mityagin, M.V.; Silkin, N.I.; Skripko, G.A.; Shkadarevich, A.P.; Yagudin, Sh.I. (KaGU; BPI). Tuneable KZnF(sub3):Cr(sup3+) crystal laser with non-selective pumping. KRISA, no. 3, 1986, 600-601.
- Alimpiyev, A.I.; Bukin, G.V.; Matrosov, V.N.; Pestryakov, Ye.V.; Solntsev, V.P.; Trunov, V.I.; Tsvetkov, Ye.G.; Chebotayev, V.P. (ITF). Tunable BeAl(sub2)O(sub4):Ti(sup3+) laser. KVEKA, no. 5, 1986, 885-886.
- Gorobchenko, V.S.; Naboykin, Yu.V.; Ogurtsova, L.A.; Pokrovskaya, F.S. (FTIANUk). Stimulated emission from diphenyl crystals with anthracene impurities in the region of low-temperature matrix phases. FNTED, no. 6, 1986, 652-655.
- 4. Kaminskiy, A.A. (). Laser crystals: advances and basic trends in research. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 5-61.
- 5. Kaminskiy, A.A.; Mill', B.V.; Sarkisov, S.E. (). Crystal chemistry, optics and spectroscopy of laser crystals with a Ca-gallogermanate structure. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 197-234.
- Kravchenko, V.B. (). Crystal chemistry problems of isomorphism in laser crystals. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 180-197.
- 7. Kruglik, G.S.; Skripko, G.A.; Shadarevich, A.P.; Kondratyuk, N.V.; Zhdanov, E.A. (BPI). Emission characteristics of an Al(sub2)O(sub3):Ti(sup3+) crystal laser under coherent pumping. KVEKA, no. 6, 1986, 1207-1213.
- Krumin', A.E.; Kuz'minov, Yu.S.; Odulov, S.G.; Polozkov, N.M.; Seglin'sh, Ya.A. (IOF; NIIFTT). Optical oscillator with frequency-degenerate pumping utilizing a BSN:Ce crystal. KVEKA, no. 5, 1986, 1037-1039.

**ፙቝ፟ዸ፟ቑጜኯ፟ጜጜጜጜጜኯ፟ዸ**ቒዸቑዸቑጜቘዹዄፘኯ፟ጜኯዸቜዄኯ፟ዺጜጜዄዄኇዺዀዄዺዄጚዄጜዄዄዄዄዄዄዄዄጜዄጜዄጜዄጜዄ

- 9. Prokhorov, A.M. (). New generation of solid state lasers. UFNAA, v. 148, no. 1, 1986, 7-33. (RZFZA, 86/5L1102).
- 10. Shkadarevich, A.P.; Nikanovich, M.V.; Reyterov, V.M.; Umreyko, D.S.; Yarmolkevich, A.R. (). Luminescence and stimulated emission from M(sub A) color centers in MgF(sub2):Li crystals. PSSAB, v. A92, no. 2, 1985, K135-K137. (RZFZA, 86/6L960).
- 11. Skripko, G.A.; Shkadarevich, A.P. (). Stimulated emission in Al(sub2)O(sub3) crystals activated by titanium and vanadium ions. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 257-268.
- 12. Yermolayev, V.L.; Sveshnikova, Ye.B. (). Experimental laws governing nonradiative transitions in activator crystals and their interpretation with positions of the inductive resonance theory. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 163-179.
- 13. Zharikov, Ye.V.; Il'ichev, N.N.; Kalitin, S.P.;
  Laptev, V.V.; Malyutin, A.A.; Osiko, V.V.; Pashinin,
  P.P.; Prokhorov, A.M.; Saidov, Z.S.; Smirnov, V.A.;
  Umyskov, A.F.; Shcherbakov, I.A. (IOF).
  Spectral-luminescent and lasing properties of a
  chromium and erbium-doped yttrium-scandium-gallium
  garnet crystal. KVEKA, no. 5, 1986, 973-979.
- b. Ruby
- 14. Asayenok, N.A.; Ivanov, N.A.; Koval'chuk, A.S.; Loyko, M.M.; Chepurnoy, V.A.; Skadarevich, A.P. (). Ruby laser with a passive shutter based on a LiF crystal with F(sup+)(sub2) color centers. ZPSBA, v. 44, no. 6, 1986, 932-935.
- 15. Pilipovich, V.A.; Kovalev, A.A.; Levashkevich, L.V.
  (). Dynamics of the formation of ultrashort pulses in a ruby laser with a passive electrooptical shutter.
  ZPSBA, v. 44, no. 6, 1986, 936-942.

c. LiF

## 2. Rare Earth

- a. Miscellaneous
- 16. Kaminskiy, A.A.; Markosyan, A.A.; Pelevin, A.V.; Polyakova, Yu.A.; Sarkisov, S.E.; Uvarova, T.V. (IKAN). Luminescence properties and stimulated emission from Pr3+, Nd3+ and Er3+ in a tetragonal lithium-lutecium fluoride. IVNMA, no. 5, 1986, 870-873.
- 17. Kaminskiy, A.A.; Perlin, Yu.Ye. (). Nonradiative transitions in three-valent lanthanides in dielectric crystals. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 125-150.
- 18. Petrosyan, A.G. (). Elementary processes in the formation of inhomogeneities in complex oxides with Ln3+ ions for obtaining stimulated emission. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 235-256.
- 19. Pukhov, K.K.; Sakun, V.P. (). Nonlinear mechanism of multiphonon nonradiative transitions in three-valent lanthanides in crystals. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 150-163.
  - b. Nd3+

CONTROL OF THE PARTY OF THE PAR

- 20. Gondra, A.D.; Gradov, V.M.; Zharikov, Ye.V.; Terent'yev, Yu.N.; Shcherbakov, A.A.; Shcherbakov, I.A. (IOF). Efficiency limit of neodymium-activated crystal lasers. IOF. Preprint, no. 5, 1986, 21 p. (RZRAB, 86/6Yell4).
- 21. Jankiewicz, Z.; Mindak, M.; Szydlak, J.; Wojcik, J. (). Analysis of the thermal focusing effect in a c-w Nd:YAG laser (in English). OPAPB, no. 2, 1985, 125-134. (RZRAB, 86/6Yel7).
- 22. Kaminskiy, A.A.; Markosyan, A.A.; Pelevin, A.V.; Polyakova, Yu.A.; Uvarova, T.V. (IKAN). Cd(1-x)Sc(subx)F(2+x) monocrystal with Nd3+ ions and its stimulated emission. IVNMA, no. 5, 1986, 873-875.
- 23. Kaminskiy, A.A.; Mill', B.V.; Butashin, A.V.; Sarkisov, S.E.; Nikol'skaya, O.K. (). Two stimulated emission channels in Nd3+ in Ca(sub3)[Nb,Ga](sub2)Ga(sub3)O(sub12) crystals. IVNMA, no. 12, 1985, 2093-2095. (RZFZA, 86/5L1108).

- c. Er3+
- 24. Antipenko, B.M.; Buchenkov, V.A.; Nikitichev, A.A.; Sobolev, B.P.; Stepanov, A.I.; Sukhareva, L.K.; Uvarova, T.V. (). Optimization of a BaYb(sub2)F(sub8):Er laser medium. KVEKA, no. 6, 1986, 1155-1160.
- 25. Kostanyan, R.B.; Sanamyan, T.V. (). Study on lifetimes of erbium levels in lutedium aluminum garnet. DANAA, no. 3, 1985, 123-130. (RZFZA, 86/5L1143).
- d. Ho3+
- 26. Alpat'yev, A.N.; Zharikov, Ye.V.; Kalitin, S.P.; Laptev, V.V.; Osiko, V.V.; Ostroumov, V.G.; Prokhorov, A.M.; Sandov, Z.S.; Smirnov, V.A.; Sorokina, I.T.; Umyskov, A.F.; Shcherbakov, I.A. (IOF). Lasing from holmium ions at the (sup5)I(sub7) to (sup5)I(sub8) transition at room temperature in yttrium-scandiumgallium garnet with chromium, thulium and holmium ions. IOF. Preprint, no. 26, 1985, 8 p. (RZFZA, 86/6L964).
- e. Tm3+

## 3. Semiconductor

- a. Theory
- 27. Alferov, Zh.I.; Tsarenkov, B.V. (FTI). Thirty-five years of A(sup III)B(sup V) semiconductors. FTPPA, no. 12, 1985, 2113-2117.
- 28. Andronov, A.A.; Nozdrin, Yu.N.; Shastin, V.N. (IPF). Tunable lasers in the far IR using hot holes in semiconductors. IANFA, no. 6, 1986, 1103-1110.
- 29. Basov, N.G.; Yeliseyev, P.G.; Popov, Yu.M. (). Semiconductor lasers. UFNAA, v. 148, no. 1, 1986, 35-53. (RZFZA, 86/5L1113).
- 30. Kudykina, T.A.; Lisitsa, M.P. (). Refractive index dispersion of semiconductors in the region of a self-absorbing edge. ZPSBA, v. 44, no. 5, 1986, 838-845.
- 31. Kurbatov, A.L.; Shubin, M.V.; Polchkova, N.D.; Baranova, N.N.; Rodin, N.V. (GOI). Tunable semiconductor lasers and their application. GOI. Trudy, no. 192, 1985, 154-163. (RZFZA, 86/5L1304).

- 32. Senoner, M.; Voigt, J. (). N(sub2) laser pumped CdS(x)Se(1-x) platelet lasers (in English). EXPPA, no. 5, 1985, 387-396. (RZFZA, 86/5L1112).
- 33. Starikov, Ye.V.; Shiktorov, P.N. (IFPV). Efficiency of solid-state radiation sources based on three-dimensional effects in p-type germanium. FTPPA, no. 6, 1986, 1076-1082.
  - b. Miscellaneous Homojunction
- c. Miscellaneous Heterojunction
- 34. Alferov, Zh.I.; Gurevich, S.A.; Markova, R.V.; Marakhonov, V.M.; Nikishin, S.A.; Portnoy, Ye.L.; Sinitsyn, M.A.; Sinyavskiy, D.V.; Timofeyev, F.N.; Fedorovich, A.Ye.; Yavich, B.S. (FTI). C-w single-frequency GaAlAs injection lasers, obtained by a hybrid technology with the use of methods of gas phase and liquid phase epitaxy. PZTFD, no. 10, 1986, 577-582.
- 35. Alferov, Zh.I.; Zhaparidze, R.O.; Ivanov, S.V.; Kop'yev, P.S.; Ledentsov, N.N.; Mel'tser, B.Ya.; Ustinov, V.M. (FTI). Laser based on a heterostructure with an active region limited by a single-layer superlattice. PZTFD, no. 9, 1986, 562-565.
- 36. An, V.A.; Nikishin, S.A.; Portnoy, Ye.L.; Sinyavskiy, D.V. (FTI). Effect of the conditions of growth on the parameters of multiwave double heterostructure lasers. ZTEFA, no. 6, 1986, 1142-1149.
- 37. Baranov, A.N.; Dzhurtanov, B.Ye.; Imenkov, A.N.; Shernyakov, Yu.M.; Yakovlev, Yu.P. (FTI). GaAlAsSb/GaSb/GaInAsSb injection heterolaser with a dual channel waveguide (double heterostructure 2 KV at 2 um), operating at room temperature. PZTFD, no. 9, 1986, 557-561.
- 38. Baranov, A.N.; Dzhurtanov, B.Ye.; Imenkov, A.N.; Rogachev, A.A.; Shernyakov, Yu.M.; Yakovlev, Yu.P. (FTI). Quantum-dimension laser with a single heterojunction. PZTFD, no. 11, 1986, 664-668.
- 39. Bessonov, Yu.L.; Kornilova, N.B.; Kurnosov, V.D.; Morozov, V.N.; Shidlovskiy, V.R. (FIAN). Linewidth of single-frequency GaAlAs injection lasers. KVEKA, no. 5, 1986, 1070-1072.

- 40. Borodkin, A.A.; Borodulin, V.I.; Vagner, N.A.; Voskoboynikova, I.V.; Goldobin, I.S.; Grekova, S.N.; Morozov, V.I.; Pashko, O.A.; Shveykin, V.I. (FIAN). Heterostructure injection lasers and integrated laser-photodetector pairs with resonators produced by microspalling. KVEKA, no. 6, 1986, 1195-1200.
- 41. Borodulin, V.I.; Vagner, I.A.; Gulyayev, Yu.V.; Pashko, O.A.; Tregub, D.P.; Elenkrig, B.B. (IRE). Watt-ampere characteristics of injection lasers with coupled resonators. ZTEFA, no. 6, 1986, 1213-1215.
- 42. Borodulin, V.I.; Vagner, N.A.; Pashko, O.A.; Tregub, D.P.; Elenkrig, B.B. (IRE). Dynamic stability of injection lasers with coupled resonators. ZTEFA, no. 6, 1986, 1244-1246.
- 43. Mikayelyan, G.T.; Sverdlov, A.I.; Sokolov, S.N. (). Spectral properties of radiation from heterostructure injection lasers with a crescent-shaped active region. KVEKA, no. 6, 1986, 1255-1258.
  - d. GaAs
  - e. CdS
- 44. Bogdankevich, O.V.; Golubkov, G.G.; Zverev, M.M.; Kopyt, S.P.; Pevtsov, V.F. (). Study on the spectral and time characteristics of CdS semiconductor lasers pumped by a pulsed e-beam. Elementarnyye protsessy v khimicheski reagiruyushchikh sredakh. Moskva, 1985, 22-26. (RZFZA, 86/5L1110).

- f. ZnSe
- q. Pb(1-x)Sn(x)Te
- h. InGaAsP
- 45. Garbuzov, D.Z.; Zaytsev, S.V.; Nivin, A.B.; Ovchinnikov, A.V.; Tarasov, I.S.; Komissarov, A.B.; Trukan, M.K. (FTI). C-w mesa band double heterostructure separately limited InGaAsP/InP lasers at 1.3 um with threshold lowering and a power increase. PZTFD, no. 11, 1986, 660-663.
- 46. Vasil'yev, M.G.; Goldobin, I.S.; Kodin, N.V.; Kurnyavko, Yu.V.; Rachkov, I.A.; Solodkov, A.F.; Yakubovich, S.D. (VNIIOFI). Analog frequency modulation of single-mode heterojunction laser radiation in the 1.3 um spectral region. KVEKA, no. 6, 1986, 1267-1269.

#### 4. Glass

- a. Miscellaneous
- b. Nd
- 47. Dzhibladze, M.I.; Isayev, S.K.; Melikishvili, Z.G.; Esiashvili, Z.G. (TbGU). Spectral characteristics of a fiber glass neodymium laser. KVEKA, no. 6, 1986, 1270-1271.
- 48. Hribek, P.; Vrbova, M. (). Nd glass laser with a plasma mirror (in English). CZYPA, v. B35, no. 12, 1985, 1331-1340. (RZFZA, 86/6G133).
- 49. Nagibin, Yu.T. (). Thermal optic distortion of a solid laser active element in a transient state and in a pumping pulse process. VINITI. Deposit, no. 1380-V86. (ZPSBA, v. 44, no. 5, 1986, 868).
  - c. Er
- B. IJQUID LASERS
  - 1. Organic Dyes
  - a. Miscellaneous
  - 50. Bondar, M.V.; Przhonskaya, O.V.; Tikhonov, Ye.A.; Fedotkina, N.M. (IFANUk). Thermooptics of the impurities of elastomers. ZTEFA, no. 5, 1986, 878-883.
  - 51. Hartmann, H.; Hultzsch, R.; Ilge, H.D.; Friedrich, B.; Hebenstreit, J.; Fassler, D. (). Laser active medium for dye lasers. Patent GDR, no. 225884, 7 Aug 1985. (RZRAB, 86/6Ye99).
  - 52. Levin, M.B.; Reva, M.G.; Rodchenkova, V.V.; Uzhinov, B.M. (MGU). Relationship between radiative and radiationless ways of energy transfer in oscillating systems. KVEKA, no. 6, 1986, 1272-1275.
  - 53. Potapov, A.I.; Sinikas, A.G.; Smirnov, A.Yu. ().
    Numerical modeling of the dynamics of internal energy
    processes in dye lasers. TsNIITEIpriboro. Deposit,
    no. 3110-pr, 25 Nov 1985, 151-166. (RZFZA, 86/6L933).
  - 54. Yegorov, K.D.; Nekhayenko, V.A.; Perhsin, S.M.; Pleshanov, S.A.; Podshivalov, A.A.; Shuvalov, V.V. (MGU). Synchronously pumped picosecond dye laser with an additional superthin resonator. KVEKA, no. 6, 1986, 1169-1174.

- 55. Yuzhakov, V.I. (MGU). Migration of the electronic excitation energy in tunable lasers utilizing multicomponent dye soutions. KVEKA, no. 6, 1986, 1118-1131.
- b. Rhodamine
- 56. Bondarev, B.V.; Kobtsev, S.M.; Sorokin, V.B. (NGU). C-w wideband dye laser. PRTEA, no. 3, 1986, 245-246.
- 57. Krindach, D.P.; Yakovlev, A.G. (MGU). Combined mode locking in a c-w rhodamine 6G laser using triphenylmethane dyes. KVEKA, no. 6, 1986, 1284-1287.
- 58. Levin, M.B.; Cherkasov, A.S. (). Study on induced absorption in aqueous micellar rhodamine 6G solutions under flashlamp pumping. ZPSBA, v. 43, no. 6, 1985, 972-978.
- c. Polymethine
- 59. Dokukina, A.F.; Yeremeyeva, Ye.P.; Ivanova, T.F.; Ishchenko, A.A.; Kol'chevskaya, T.O.; Piterkin, B.D.; Smirnova, Z.A.; Tolmachev, A.I. (). Factors determining the shape of long-wave absorption bands of polymethine dyes in polymer matrices. OPSPA, vol. 60, no. 5, 1986, 937-942.
- d. Coumarin
- e. Phthalimide
- f. Cyanine
- q. Xanthene
- h. POPOP
- 2. Inorganic Liquids
- C. GAS LASERS

### 1. Theory

- 60. Basov, N.G.; Danilychev, V.A. (). Condensed- and compressed-gas lasers. UFNAA, v. 148, no. 1, 1986, 55-100. (RZFZA, 86/5L1063).
- 61. Basov, N.G.; Danilychev, V.A.; Dolgikh, V.A.; Kerimov, O.M.; Myznikov, Yu.F.; Soroka, A.M. (FIAN). Ultimate specific energy input into hydrogen and the role of vibrational-to-vibrational processes. KVEKA, no. 6, 1986, 1161-1168.

- 62. Devdariani, A.Z.; Ostrovskiy, V.N. (). Exothermal charge exchange with ion excitation: extrapolation of cross-sections into the range of thermal collisions. OPSPA, vol. 60, no. 5, 1986, 904-909.
- 63. Mesyats, G.A.; Korolev, Yu.D. (). High-pressure space charges in gas lasers. UFNAA, v. 148, no. 1, 1986, 101-122. (RZFZA, 86/5L1064).

## 2. Simple Mixtures

- a. Miscellaneous
- b. He-Ne
- 64. Gonchukov, S.A.; Kireyev, S.V.; Protsenko, Ye.D. (MIFI). Frequency resonances in a three-mode laser with a nonlinearly absorbing cell. KVEKA, no. 6, 1986, 1259-1261.
- 65. Krylov, P.S. (VNIIM). Feed source of an active element He-Ne/(supl27)I(sub2) laser. PRTEA, no. 3, 1986, 191-193.
- 66. Popescu, Gh. (). Single-frequency He-Ne laser. Patent Romania, no. 86597, 30 Apr 1985. (RZRAB, 86/6Ye63).
- 67. Popov, A.I.; Sagadeyev, A.M.; Sadchikhin, A.V. (). Physical characteristics of the 3.3922 and 3.3912 um transitions of a helium-neon laser. ZPSBA, v. 44, no. 6, 1986, 1009-1012.
- 68. Udal'tsov, B.V.; Tsar'kov, V.A. (). Reactive oscillations in a two-anode symmetrical neon-helium laser discharge. RAELA, no. 5, 1986, 938-944.
  - c. He-Xe
  - d. He-Kr
  - e. Ar-Xe
- Molecular Beam and Ion
- a. Miscellaneous
- b. Carbon Dioxide
- 69. Antipov, V.N.; Fishman, I.S. (). Fine retuning of CO2 laser radiation frequency within the limits of a single amplification contour. ZPSBA, v. 44, no. 6, 1986, 1034.

- 70. Baranov, V.Yu.; Drckov, G.F.; Kuz'menko, V.A.; Mezhevov, V.S.; Pigul'skaya, V.V. (IAE). Stabilization of the composition of a gas medium of a repetitively pulsed CO2 laser with the use of hopcalite. KVEKA, no. 5, 1986, 989-992.
- 71. Bel'tyugov, V.N.; Kuznetsov, A.A.; Ochkin, V.N.; Sobolev, N.N.; Troitskiy, Yu.V.; Udalov, Yu.B. (FIAN). Use of a combined resonator to breaden the band of continuous tuning of a gas laser frequency. KVEKA, no. 5, 1986, 932-936.
- 72. Bykov, A.D.; Galushkin, M.G.; Zarubin, P.V.;
  Lyakishev, V.G.; Rodionov, V.I.; Seregin, A.M.;
  Ulenikov, O.N.; Ustinov, N.D.; Cheburkin, N.V. ().
  Spectral characteristics of (supl2)C(sup18)O(sub2)
  lasers. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy.
  Part 3. Tomsk, 1986, 164-168.
- 73. Deryugin, A.A.; Likhanskiy, V.V.; Napartovich, A.P. (IAE). Sound vibrations in a gas-flow CO2 laser with an unstable resonator. KVEKA, no. 5, 1986, 950-955.
- 74. Dubrovskiy, G.V.; Strel'chenya, V.M. (). Relaxation of anharmonic molecules. ZPMFA, no. 3, 1986, 22-31.
- 75. Kamenicky, I. (). The ELA-001-A high-power c-w CO2 laser (in Slovakian). Trend VUMA, no. 4, 1985, 15-23. (RZFZA, 86/5L1073).
- 76. Karlov, N.V.; Kisletsov, A.V.; Kovalev, I.O.; Kuz'min, G.P.; Movshev, V.G.; Nesterenko, A.A.; Prokhorov, A.M.; Toker, G.R. (IOF). Electric discharge high-pressure CO2 laser with a plasma cathode. PZTFD, no. 10, 1986, 617-622.
- 77. Kon'kov, A.A.; Lotkova, E.N.; Ponomarev, D.I.; Yuzhakova, I.P. (FIAN). Selective attachment to the radiating element of an ILGN-706 CO2 laser. PRTEA, no. 3, 1986, 189-191.
- 78. Orishich, A.M.; Posukh, V.G.; Snytnikov, V.N. (ITPM). Effect of the injection of external radiation on the stimulated emission from an unstable-resonator TEA laser. KVEKA, no. 6, 1986, 1292-1294.
- 79. Solodukhin, A.S.; Trushin, S.A. (). CO2 laser operating in the 4.3 and 10.6 um region. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 313.

- 80. Vol'skaya, S.P.; Tselykovskiy, A.F. ().
  Metal-ceramic waveguide CO2 laser with radio-frequency
  pumping. IVUBA, no. 2, 1986, 85-88. (RZFZA,
  86/6L911).
- 81. Yermachenko, V.M.; Petrovskiy, V.N.; Protsenko, Ye.D.; Rurukin, A.N.; Shananin, R.A. (). Frequency characteristics of a dual-mode CO2 laser with a phase-anisotropic resonator. ZPSBA, v. 44, no. 6, 1986, 942-947.
- 82. Zybin, D.N.; Lipatov, N.I.; Pashinin, P.P.; Petrov, A.N.; Prokhorov, A.M.; Yurov, V.Yu. (). Ln(subl-x)Sr(subx)CoO(sub3)[Ln:La, Nd] oxides for cathodes of waveguide CO2 lasers. PZTFD, no. 10, 1986, 622-627.
- b. Carbon Monoxide
- c. Noble Gas

- 83. Apolonskiy, A.A.; Donin, V.I.; Timofeyev, T.T. (IAESOAN). High-power ion laser with broadened functional capabilites. KVEKA, no. 5, 1986, 1004-1009.
- 84. Bunkin, F.V.; Derzhiyev, V.I.; Mesyats, G.A.; Murav'yev, I.I.; Skakun, V.S.; Tarasenko, V.F.; Fedenev, A.V.; Yakovlenko, S.I.; Yancharina, A.M. (IOF; ISE). Penning plasma lasers using neon transitions. IANFA, no. 6, 1986, 1064-1074.
- 85. Butkevich, V.I.; Privalov, V.Ye.; Skvortsova, G.V.
  (). Fluctuations of argon ion laser radiation.
  2PSBA, v. 44, no. 5, 1986, 747-753.
- 86. Ivanov, V.A.; Skoblo, Yu.E. (LGU). Kinetics of the plasma decay of diffuse and contracted discharges in xenon. FIPLD, no. 6, 1986, 708-713.
- e. Nitrogen
- 87. Khait, O.V. (LGU). Optimizing the structural elements of a nitrogen laser used as a pump source for a dye laser. VINITI. Deposit, no. 1494-V, 5 Mar 1986, 7 p. (RZFZA, 86/6L596).

- f. Iodine
- g. Hydrogen
- h. Ammonia
- i. Carbon Tetrafluoride
- i. Nitrous Oxide
- k. Water Vapor
- 1. Heavy-Water Vapor
- m. Submillimeter
- 88. Kubarev, V.V. (IYaFSOAN). Optimized HCN laser. PRTEA, no. 3, 1986, 177-179.
- n. Metal vapor
- 89. Blagoyev, K.B.; Kas'yanenko, S.V.; Krauze, U.; Tolmachev, Yu.A. (). Inelastic collisions of excited helium and normal rubidium atoms. OPSPA, vol. 60, no. 5, 1986, 896-903.
- 90. Isayev, A.A.; Lemmerman, G.Yu; Petrash, G.G. (FIAN). Thermal conditions and characteristics of the stimulated emission from a self-heated copper-vapor laser. KVEKA, no. 5, 1986, 1034-1037.
- 91. Tretyak, V.P.; Voronyuk, L.V.; Glushchenko, O.A.; Popov, A.V. (KGU). Solution to the problem of optimal control of the performance of metal vapor lasers. KGU. Vestnik. Modelirovaniye i optimizatsiya slozhenykh sistem, no. 5, 1986, 19-23. (RZFZA, 86/6L895).
- 92. Yelayev, V.F.; Mirza, S.M.; Sukhanov, V.B.; Troitskiy, V.O.; Soldatov, A.N.; Filonov, A.G. (SKBOptika). Effect of background radiation from an unstable-resonator copper-vapor laser on stimulated emission from dyes. KVEKA, no. 5, 1986, 914-917.
- o. Gasdynamic
- 93. Biryukov, A.S.; Serikov, R.I.; Starik, A.M.; Shcheglov, V.A. (FIAN). Three-frequency CO2 gasdynamic laser with optical feedback. FIAN. Preprint, no. 102, 1985, 16 p. (RZFZA, 86/6L922).

94. Vigasin, A.A.; Losev, S.A.; Makarov, V.N. (IMMGU).

Inverse population of electronic states in alkali
metals in mixtures with molecular gasses upon cooling
in a supersonic nozzle. KVEKA, no. 6, 1986, 1185-1194.

#### 4. Excimer

- 95. Bibinov, N.K.; Vinogradov, I.P.; Mikheyev, L.D; Stavrovskiy, D.B. (NIIFL). Formation and destruction of KrF excimer molecules during KrF(sub2) photolysis. KHFID, no. 5, 1986, 615-619.
- 96. Dem'yanov, A.V.; Yegorov, V.S.; Kochetov, I.V.;
  Napartovich, A.P.; Pastor, A.A.; Penkin, N.P.;
  Serdobintsev, P.Yu.; Shubin, N.I. (IAE). Dynamics of
  populations of electronic states of atoms and ions in
  a self-sustained discharge in a HCl-Xe-He mixture.
  KVEKA, no. 6, 1986, 1250-1254.
- 97. Geyman, V.G.; Genkin, S.A.; Korolev, Yu.D.; Mesyats, G.A. (ISE). Self-sustaining volumetric discharge, stimulated by X-ray radiation in a He:Xe:HCl mixture under large interelectrode spacings. PZTFD, no. 11, 1986, 656-660.
- 98. Isakov, I.M.; Leonov, A.G.; Nevmerzhitskiy, V.I.; Novobrantsev, I.V.; Solov'yev, V.R. (MFTI). Mechanism of the disappearance of inversion in XeCl lasers, stimulated by electron beams. PZTFD, no. 11, 1986, 690-694.
- 99. Ishchenko, V.N.; Kochubey, S.A.; Razhev, A.M. (ITF). High-power efficient vacuum ultraviolet F(sub2) laser excited by an electric discharge. KVEKA, no. 5, 1986, 1072-1075.
- 100. Khapov, Yu.I. (IAESOAN). Compact electron accelerator for the stimulation of excimer lasers. PRTEA, no. 3, 1986, 186-189.
- 101. Lavrik, N.L.; Nechayev, O.V. (IKhKG). Spectral-time relation of the magnetic modulation of fluorescence in polar exciplex systems. KHFID, no. 6, 1986, 786-794.
- 102. Yeletskiy, A.V. (). Capture-vibrational instability. ZTEFA, no. 5, 1986, 850-855.

## 5. Dye Vapor

103. Asimov, M.M.; Portnov, Ye.V.; Rubinov, A.N. ().
Oxazine and xanthene dye vapors in a supersonic
molecular jet. OPSPA, vol. 60, no. 6, 1986, 1288-1289.

### D. CHEMICAL LASERS

#### 1. Miscellaneous

## Fluorine + Hydrogen (Deuterium)

- 104. Agroskiy, V.Ya.; Vasil'yev, G.K.; Gur'yev, V.I.; Tatarinov, E.Ye. (). Determination of absorption cross-sections of radiation lines of a HF-laser by CO2, N(sub2)O, and CH4 molecules which compose an impurity in the air. ZPSBA, v. 44, no. 6, 1986, 953-957.
- 105. Bashkin, A.S.; Zolotarev, V.A.; Kulakov, L.V.; Frolov, M.P. (FIAN). Formation of short emission pulses in an atmospheric-pressure H(sub2)-F(sub2) chemical laser. KVEKA, no. 5, 1986, 1065-1068.

### 3. Photodissociation

- 106. Bazhulin, S.P.; Basov, N.G.; Bugrimov, S.N.; Zuyev, V.S.; Kamrukov, A.S.; Kashnikov, G.N.; Kozlov, N.P.; Ovchinnikov, P.A.; Opekan, A.G.; Orlov, V.K.; Protasov, Yu.S. (). Blue-violet HgI/HgI(sub2) laser with wideband optical pumping by a linearly stabilized surface discharge. KVEKA, no. 5, 1986, 1017-1019.
- 107. Bazhulin, S.P.; Basov, N.G.; Bugrimov, S.N.; Zuyev, V.S.; Kamrukov, A.S.; Kashnikov, G.N.; Kozlov, N.P.; Ovchinnikov, P.A.; Opekan, A.G.; Orlov, V.K.; Protasov, Yu.S. (FIAN; MVTU). Green mercury chloride laser with wideband optical pumping. KVEKA, no. 6, 1986, 1275-1278.

#### 4. Transfer

## 5. Oxygen + Iodine

108. Vagin, N.P.; Kryukov, P.G.; Pazyuk, V.S.; Yuryshev, N.N. (FIAN). Effect of water vapor on the energy of pulsed oxygen-iodine laser action. KVEKA, no. 5, 1986, 1068-1069.

- 6. Carbon Disulfide + Oxygen
- 7. Sulfur Hexafluoride + Hydrogen

### E. COMPONENTS

- 1. Miscellaneous
  - 2. Resonators
- a. Design and Performance
- 109. Anan'yev, Yu.A. (). Huygens-Fresnel principle and integral equations of open resonators. OPSPA, v. 59, no. 6, 1985, 1384-1386.
- 110. Anan'yev, Yu.A.; Anikichev, S.G. (). Approximate method for solving integral equations of stable resonators. OPSPA, v. 59, no. 6, 1985, 1331-1336.
- 111. Belinskiy, A.V.; Chirkin, A.S. (MGU). Fabry-Perot resonator with phase inhomogeneities distributed over its volume. KVEKA, no. 5, 1986, 1045-1048.
- 112. Bunimovich, L.A. (IOAN). Stochastic dynamics of beams in resonators. IVYRA, no. 12, 1985, 1601-1602.
- 113. Lyubimov, V.V. (GOI). Oscillations in open resonators and directivity of laser radiation. GOI. Trudy, no. 192, 1985, 135-145. (RZFZA, 86/5L1169).

THE POSTERIOR PRODUCED PRODUCED BEAUTION PRODUCED BYDOODS PROCESS PARAMENT PRODUCED BYDOODS

- 114. Poehler, M.; Wittig, R.; Henschler, D. (). Device for stabilizing the output parameters of a folded laser resonator. Patent GDR, no. 226172, 14 Aug 1985. (RZRAB, 86/6Ye475).
- 115. Zavgorodneva, S.I.; Koval'chuk, L.V.; Rodionov, A.Yu.(). Unstable resonator with a perforated mirror.KVEKA, no. 5, 1986, 924-931.
  - b. Mode Kinetics

- 116. Iogansen, A.A.; Pestunov, V.Yu.; Cheskis, S.G. (IKhF). Digital pulse delay unit for the control of pulsed lasers. PRTEA, no. 3, 1986, 182-185.
- 117. Smirnov, V.N.; Strokovskiy, G.A. (). Generation of transverse modes in a ring laser with a one-dimensional diaphragm. OPSPA, vol. 60, no. 5, 1986, 1053-1060.

## 3. Pump Sources

- 118. Andreyev, A.A.; Shlimak, I.S. (). Photoelectric phenomena in amorphous hydrogenated silicon and solar energy converters. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 222-252.
- 119. Andreyev, V.M.; Rumyantsev, V.D. (). Photoelectric concentrated solar energy converters based on heterostrucures. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 181-204.
- 120. Arutyunyan, V.M. (). Photoelectrochemical conversion of solar energy by semiconductor electrodes. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 253-287.
- 121. Brueckner, V.; Kerstan, F. (). Method and device for generating short optical and/or electric pulses. Patent GDR, no. 225285, 24 Jul 1985. (RZRAB, 86/6Ye522).
- 122. Kagan, M.B. (). Heterogeneous, cascade and combined GaAs photoconverters. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 205-221.
- 123. Kel'man, V.A.; Klimovskiy, I.I.; Fuchko, V.Yu.; Zapesochnyy, I.P. (KIYaI). Study on the performance of a thyratron in an excitation circuit for a copper vapor laser. KIYaI. Preprint, no. 16, 1985, 31 p. (RZRAB, 86/6Ye504).
- 124. Yevdokimov, V.M. (). Problems in the theory and prospects for improving the efficiency of photoconverters. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 148-180.

- 4. Cooling Systems
  - 5. Deflectors
  - Attenuators
  - Collimators

## 8. Diffraction Gratings

- 125. Boltar', K.O.; Fedirko, V.A. (VNIPKTIIT). Conversion of surface electromagnetic waves by a dielectric film diffraction grating. ZTEFA, no. 5, 1986, 917-918.
- 126. Durasov, V.M.; Ivakin, Ye.V.; Rubanov, A.S. (IFANB). Self-diffraction and reflection of radiation under degenerate four-wave mixing in organic liquids at the wavelength of 10.6 um. KVEKA, no. 6, 1986, 1287-1289.
- 127. Kavtrev, A.F.; Lashkov, G.I.; Yermolayev, V.L. (). Three-dimensional phase diffraction gratings with an effective thickness of 100 um. ZPSBA, v. 43, no. 6, 1985, 996-1001.
- 128. Nikitin, V.A.; Malyy, A.V. (GOI). Study on the efficiency of echelletes. OPMPA, no. 8, 1985, 1-3.
- 129. Stankov, K. (). Distortion and broadening of Gaussian ultrashort light pulses by a diffraction grating (in English). Bolgarskiy fizicheskiy zhurnal, no. 4, 1985, 424-428. (RZFZA, 86/6L997).

## 9. Focusers

- 130. Andreyev, V.N. (). Automatic focuser. OTIZD, no. 42, 1985, 1191937. (RZRAB, 86/5Ye578).
- 131. Avrutskiy, I.A.; Bazakutsa, P.V.; Svakhin, A.S.; Sychugov, V.A. (MFTI). Planar focusing element. OTIZD, no. 45, 1985, 1196793. (RZRAB, 86/6Ye524).

132. Krabe, D. (). Device to vary the focus of an electromagnetic beam. Patent GDR, no. 225238, 24 Jul 1985. (RZRAB, 86/5Ye516).

#### 10. Windows

## 11. Polarizers

133. Jungk, G. (). Polarizer for electromagnetic radiation. Patent GDR, no. 224684, 10 Jul 1985. (RZRAB, 86/6Ye534).

## 12. Beam Shapers

134. Zdobnikov, A.Ye.; Krylov, A.N.; Lysov, A.B.; Romanov, D.A. (). Designing optical systems to shape laser beams. IVZAA, no. 6, 1985, 116-118. (RZFZA, 86/5L657).

#### 13. Lenses

135. Borodin, V.G.; Vesnin, V.N.; Vishnevskaya, L.V.; Gorokhov, A.A.; Listratova, G.V.; Lyubimov, V.V.; Mak, A.A.; Migel', V.M.; Serebryakov, V.A.; Starikov, A.D.; Filimonova, Z.K.; Chunin, B.A. (GOI). Fast lenses for concentration of radiation. OPMPA, no. 6, 1986, 5-8.

### 14. Filters

- 136. Fedak, V.V.; Mel'nichenko, T.N.; Kikineshi, A.A. (). Interference optical filters with controlled parameters. ZPSBA, v. 44, no. 6, 1986, 987-991.
- 137. Freyer, W. (). Light absorbing material for 1.3 um. Patent GDR, no. 224971, 17 Jul 1985. (RZRAB, 86/6Ye537).
- 138. Pokrovskiy, Yu.A.; Tumanova, L.A.; Khurkhulu, Yu.S. (TulPI). Tunable narrowband frequency filters in the optical range based on resonant optical antennas. VINITI. Deposit, no. 1471-V, 5 Mar 1986, 8 p. (RZFZA, 86/6L627).

139. Tsnobiladze, N.A. (). Discretely tunable light filter. SAKNA, v. 119, no. 3, 1985, 497-500. (RZFZA, 86/6L628).

## 15. Beam Splitters

140. Zallmann, K.; Thielecke, W. (). Multichannel optoelectronic beam splitter. Patent GDR, no. 225293, 24 Jul 1985. (RZRAB, 86/5Ye298).

#### 16. Mirrors

- 141. Alekseyev, V.A.; Antsiferov, V.N.; Apollonov, V.V.; Bilibin, S.V.; Gadzhiyev, M.G.; Kunevich, A.P.; Narusbek, E.A.; Prokhorov, A.M.; Khomich, V.Yu. (IOF). Possibility of developing large mirrors of cellular materials. PZTFD, no. 22, 1985, 1350-1354.
- 142. Bauer, S.M.; Kovalev, A.M.; Petrov, M.B.; Tikhomirov, V.V.; Tovstik, P.Ye. (GOI). Numerical study on temperature deformations in optical mirrors. OPMPA, no. 9, 1985, 26-28.

- 143. Bol'shanin, A.F.; Putilin, E.S.; Starovoytov, S.F.
  (). Measuring the radiation resistance of dielectric mirrors in laser resonators. IVUBA, no. 1, 1986, 71-78. (RZRAB, 86/5Ye456).
- 144. Boyko, V.I.; Luk'yanchuk, B.S.; Tsarev, Ye.R. (IOF). Diffusion mechanism of damage to reflective coatings on a metal mirror. IOF. Preprint, no. 320, 1985, 27 p. (RZFZA, 86/6L644).
- 145. Gerasimov, V.B.; Zakharov, M.V.; Lyubimov, V.V.;
  Makarov, N.A.; Orlov, V.K. (). Partial self-phasing
  of retro-mirror elements in a resonator. KVEKA, no.
  6, 1986, 1278-1281.
- 146. Ivanova, L.A.; Makarov, V.V.; Rudina, O.G.; Tikhomirov, G.P.; Turovskaya, T.S. (). Study on the surface morphology and properties of metal mirrors. OPMPA, no. 12, 1985, 4-6. (RZRAB, 86/5Ye486).
- 147. Necsoiu, T.; Florea, V.; Lancranjan, I. (). Device for mounting output mirrors for solid state lasers. Patent Romania, no. 85219, 30 Apr 1985. (RZRAB, 86/5Ye517).
- 148. Timus, C.; Medianu, R.; Georgescu, Cl. (). Modeling the reflectional characteristics of laser mirrors in the visible range. SCEFA, no. 10, 1985, 952-957. (RZFZA, 86/6L625).
- 149. Troitskiy, Yu.V. (). Dispersion and control of the combined phase value of multilayer dielectrics. OPSPA, vol. 60, no. 6, 1986, 1277-1283.

## 17. Detectors

- 150. Anilenene, Yu.K.; Bayorunas, E.K. (). Study on noise immunity in digital photodetectors. RADID, no. 2, 1985, 58-64. (RZRAB, 86/6Ye491).
- 151. Bezmaternykh, L.N.; Dem'yantseva, S.D.; Tabarin, V.A.
  (). Thermal detector of optical radiation, based on ferromagnetic resonance. IVUZB, no. 1, 1986, 98-99.
  (RZRAB, 86/6Ye490).
- 152. Dmitriyev, A.P.; Mikhaylova, M.P.; Yassiyevich, I.N. (). Shock ionization in A(sup3)B(sup5) semiconductors and solid solutions based on them. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 76-104.

- 153. Gorelenok, A.T. (). Problems in the technology of isoperiodic multicomponent A(sup3)B(sup5) heterostructures for photodetectors in the 1.1-1.6 um spectral range. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 37-63.
- 154. Jozwikowski, K.; Orman, Z.; Rogalski, A. ().
  Performance of non-cooled (In, As)Sb
  photoelectromagnetic detectors for 10.6 um radiation.
  PSSAB, v. A91, no. 2, 1985, 745-751. (RZFZA, 86/6L605).
- 155. Kolenko, Ye.A.; Orlov, V.A. (GOI). Thermoelectric cooling of radiation detectors. OPMPA, no. 9, 1985, 12-14.
- 156. Korol'kov, V.I. (). High-speed high-efficiency heterostructure photodetectors. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 6-36.
- 157. Naboko, V.N.; Mitev, V.; Gurdev, L.; Simeonov, V.; Grigorov, I. (). Study on the dynamic range and fast response of a photomultiplier operating in a photon counting routine (in Bulgarian). TKMSB, no. 3, 1985, 43-47. (RZFZA, 86/6L600).
- 158. Rumyantsev, K.Ye. (). Robust detector of radiation modulated by subcarrier frequency intensity. IVUZB, no. 1, 1986, 31-36. (RZRAB, 86/5Ye553).
- 159. Vul', A.Ya.; Dideykin, A.T.; Kozyrev, S.V. ().
  Photodetectors based on metal-dielectric-semiconductor structures. Fotopriyemniki i fotopreobrazovateli.
  FTI. Leningrad, Nauka, 1986, 105-130.
- 160. Vul', A.Ya.; Kidalov, S.V.; Saydashev, I.I. (). Selective GaAs-GaSb photodiodes. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 64-75.

### 18. Modulators

- 161. Akmanov, A.G.; Smirnov, I.A.; Yamaletdinov, A.G. (BashGU). Shaper of high voltage modulating compound pulses for control of a laser. PRTEA, no. 3, 1986, 127-129.
- 162. Arkhipov, R.N.; Yevstigneyev, V.L.; Zharikov, Ye.V.; Pshenichnikov, S.M.; Shcherbakov, I.A.; Yumashev, V.Ye. (IOF). Optimization of the outcoupling of stored energy during a Q-switching operation for GSGG-Cr, Nd laser rods. KVEKA, no. 5, 1986, 1048-1050.

- 163. Bakinovskiy, K.N.; Ray, G.I.; Shakin, O.V.; Sharonov, G.V. (NIIPFP). Multi-purpose device for the obtaining and control of mode-locking in continuous lasers. PRTEA, no. 3, 1986, 246.
- 164. Bakinovskiy, K.N.; Ray, G.I.; Shakin, O.V.; Sharonov, G.V. (NIIPFP). Q-factor modulation control device of an optical resonator. PRTEA, no. 3, 1986, 247.
- 165. Basyayeva, L.I.; Vladimirov, F.L.; Morichev, I.Ye.; Pletneva, N.I. (GOI). Space-time modulator of light based on a photosemiconductor-liquid crystal structure. GOI. Trudy, no. 192, 1985, 39-43. (RZFZA, 86/5L830).
- 166. Brueckner, V.; Kerstan, F. (). Fast response time measurements in transistors using picosecond optoelectronic switches (in English). PSSAB, v. A91, no. 2, 1985, K179-K183. (RZFZA, 86/6Zh699).
- 167. Bryksin, V.V.; Korovin, L.I. (FTI). Rotation of the polarization vector in spatial modulators of light using the Pockels effect. ZTEFA, no. 12, 1985, 2289-2296.
- 168. Chigrinov, V.G.; Belyayev, V.V.; Vasil'yev, A.A. (FIAN). Orientational effects in nematic liquid crystals in electric and magnetic fields. Optical characteristics. Use in space-time light modulators. FIAN. Preprint, no. 25, 1986, 58 p. (RZFZA, 86/6L678).
- 169. Danilov, V.V.; Savel'yev, D.A. (). Modulation of CO2 laser radiation by a liquid crystal modulator. ZTEFA, no. 6, 1986, 1239-1241.
- 170. Konobeyev, V.M.; Zagorskiy, Ya.T.; Kuznetsov, A.A.; Levi, A.M.; Ulanovskiy, M.V. (). Optical switch with controlled time of exposure. IZTEA, no. 6, 1986, 41-43.
- 171. Kovalev, A.A.; Nekrasov, G.L.; Serak, S.V.;
  Martynovich, A.A. (). Thermooptical modulation of
  laser radiation reflected by a thin layer of a nematic
  liquid crystal. ZPSBA, v. 44, no. 5, 1986, 741-747.
- 172. Ostroumenko, A.P.; Prud P.; Shmal'ko, A.V. (DGU). Optical phase m acor. OTIZD, no. 42, 1985, 1191994. (RZRAB, 86/6' 212).

mente describer de la proposition de la constante de la consta

- 173. Vasil'yev, A.A.; Gruzevich, Ye.K.; Levov, S.N.; Parfenov, A.V.; Chigrinov, V.G. (FIAN). Resolving power of liquid-crystal space-time radiation modulators. Mathematical modeling and experimental results. FIAN. Preprint, no. 1, 1986, 55 p. (RZFZA, 86/6L677).
- 174. Vaytekunas, F.K.; Kurshyalis, S.K. (). ynchronous modulation of semiconductor lasers by sinusoidal current and light. IVUZB, no. 12, 1985, 66-68. (RZRAB, 86/6Ye203).
- 175. Westphal, K.D.; Westphal, U.; Spickermann, G.; Schulz, P. (). Switching device in a laser module. Patent GDR, no. 225551, 31 Jul 1985. (RZRAB, 86/6Ye523).
- F. NONLINEAR OPTICS

## 1. General Theory

- 176. Akhmanov, S.A. (MGU). Nonlinear optics at Moscow University. IANFA, no. 6, 1986, 1050-1063.
- 177. Alekseyev, A.V.; Sushilov, N.V. (TOI). Persistent nutation in a two-level system. ZETFA. v. 89, no. 6, 1985, 1951-1956.
- 178. Arakelyan, S.M.; Chilingaryan, Yu.S. (YeGU). Optical bistability in liquid crystals: surface phenomena, distributed feedback systems, nonlinear scattering and nonlinear Fabry-Perot resonators. IANFA, no. 6, 1986, 1123-1133.
- 179. Arakelyan, S.M.; Karn, A.; Ong, Kh.L.; Shen, I.R. (YeGU). Internal optical bistability in photoinduced structural phase transitions in nematic liquid crystals. IANFA, no. 6, 1986, 1182-1186.
- 180. Auzin'sh, M.P.; Suvorov, A.Ye.; Ferber, R.S. ().
  Description of nonlinear beat resonance in diatomic
  molecules in a dipole oscillator model. LZFTA, no. 6,
  1985, 49-52. (RZFZA, 86/5L1023).
- 181. Averbukh, I.Sh.; Kovarskiy, V.A.; Perel'man, N.F. (). Optical bistability based on multiphoton resonance processes. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 3-40.
- 182. Bajer, J.; Perina, J. (). Photon statistics of degenerate four-wave mixing with classical and quantum pumping (in English). CZYPA, v. B35, no. 10, 1985, 1146-1162. (RZFZA, 86/6L837).

- Bardetskiy, P.I.; Shmiglyuk, M.I.; Tiron, Sh.D. 183. Nonlinear optical nutation at interexciton transitions

- 183. Bardetskiy, P.I.; Shmiglyuk, M.I.; Tiron, Sh.D. (). Nonlinear optical nutation at interexciton transitions in Cu(sub20). PSSBs. v. Bl31, no. 1, 1985, 235-241. (RRFZA, 86/51999).
  184. Belov, A.L.; Kraynov, V.P. (). Excitation of atoms by short light pulses during optical collision. OFSPA, v. 60, no. 1, 1986, 18-19.
  185. Bogolyubov, N.N.; Fam Le Kien; Shumovskiy, A.S. (OIYaI). Collapse and recovery of nonlinear Rabi oscillations in a model of a three-level atom. DANKA, vol. 288, no. 3, 1986, 590-592.
  186. Bogolyubov, N.N.; Fam Le Kiyen; Shumovskiy, A.S. (). Dynamics of two-photon processes in three-level systems. Problemy sovremennoy statisticheskoy fiziki. ITEFUK. Kiyev, 1985, 43-50. (REYZA, 86/61628).
  187. Brazovskiy, V.Ye. (). Optical nonlinearity of a two-level medium. OPSPA, vol. 60, no. 5, 1986, 1067-1069.
  188. Bukhenskiy, M.F.; Kanayev, A.V.; Lipatov, N.I. (). Final plenary session of the scientific council of the USSR Academy of Sciences on the problem of coherent and nonlinear opitos (Tbilisi, May 27-29, 1985). KVEKA, no. 5, 1986, 1076-1085.
  189. Cao Long Van (). Dicke model in a coherent state representation (in English). ATPLB. v. A68, no. 4, 1985, 647-665. (REFZA, 86/51992).
  190. German, S.I.; Chaykovskiy, I.A.; Shmelev, G.M. (). Conductivity of strongly inhomogeneous semiconductors in an alternating electric field. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IFPANM. Kishinev, Shtiintsa, 1986, 71-78.
  191. Germey, K.; Herger, R.L.; Herklotz, R.; Mareyen, M.; Schuette, F.J.; Tiebel, R.; Worlitzer, K. (). Effect of noise on a dispersive optical bistable system with trillinear interaction (in English). ANPYA, no. 1, 1985, 13-24. (REFZA, 86/5L011).
  192. Gelovehenko, Ye.A.; Dianov, Ye.M.; Prokhorov, A.M.; Serkin, V.N. (109). Self-action of femtosecond optical wave packets. DANKA, vol. 288, no. 4, 1986,

- 193. Kovarskiy, V.A.; Sinyavskiy, E.P.; Chebotar', V.N.; Chernysh, L.V. (). Quantum transitions in systems with inverse hydrogen-like series. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 40-63.
- 194. Krest'yaninov, A.S.; Mityugov, V.V. (). Optical measurement of continuous quantities. RAELA, no. 5, 1986, 891-897.
- 195. Lomtev, A.I.; Bol'shinskiy, L.G. (). Nonlinear surface polaritons on a superlattice. UFIZA, no. 1, 1986, 34-37. (RZFZA, 86/6L1124).
- 196. Mazurenko, Yu.T. (). Determination of resonance Raman scattering by the coherence function. OPSPA, v. 60, no. 1, 1986, 194-196.
- 197. Mukhtarov, Ch.K. (IOF). Electron energy in a strong light field. IOF. Preprint, no. 21, 1986, 13 p. (RZFZA, 86/6L857).
- 198. Novikov, V.D.; Pestov, E.G. (). Sixth International School on Coherent Optics, Ustorn, Poland, 19-26 Sep 1985. KVEKA, no. 6, 1986, 1306-1310.
- 199. Perlin, Ye.Yu.; Fedorov, A.V. (). Multiphoton absorption in semiconductors in the submillimeter range. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 92-104.
- 200. Petrov, N.S.; Shakin, V.A. (). Phase hysteresis under total reflection of light from a transparent layer with a nonlinear second boundary. ZPSBA, v. 44, no. 1, 1986, 159-162.
- 201. Rozanov, N.N. (GOI). Optical bistability: current status and prospects. GOI. Trudy, no. 193, 1985, 1-28. (RZRAB, 86/6Ye2).
- 202. Starkov, A.V. (VTsSOAN). Problems in the nonlinear theory of optimization of statistical modeling of radiation transfer in a layer of matter with anisotropic scattering. VTsSOAN. Preprint, no. 597, 1985, 14 p. (RZFZA, 86/5L988).
- 203. Vlasov, R.A.; Gadomskiy, O.N.; Gadomskaya, I.V.; Samartlev, V.V. (IFANB; YelGPI; KazFTI). Nonlinear reflection and refraction of ultrashort light pulses at the surfaces of resonant media and the effects of phase memory. ZETFA, vol. 90, no. 6, 1986, 1938-1951.

- 204. Yevseyev, I.V.; Yermachenko, V.M.; Tsikunov, V.N. (). Measuring the relaxation times of resonant levels of molecules by stimulated photon echo. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 266-270.
- 205. Zabolotskiy, A.A. (IAESOAN). Cooperative Raman scattering in extended media. IAESOAN. Preprint, no. 307, 1986, 12 p. (RZFZA, 86/6L825).
- 206. Zege, E.P.; Gribov, L.A.; Perelygin, I.S. ().
  Optical transmission function of a highly scattered layer. ZPSBA, v. 44, no. 5, 1986, 854-860.

- 207. Zenchenko, V.P. (). Multiphonon band-band recombination in narrowband semiconductors. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 79-83.
- 208. Zheludev, N.I.; Karasev, V.Yu.; Kostov, Z.M.; Nunuparov, M.S. (MGU). Giant exciton resonance in nonlinear optical activity. ZFPRA, vol. 43, no. 12, 1986, 578-581.

PROTECUL PROCECCI SENSONO DESCRIPCIO PORTINDO PORTINO DECENSO.

- 209. Zhidkov, A.G.; Yakovlenko, S.I. (IOF). Theory on absorption of intense resonance radiation during collisions between atoms and structureless particles. Methodological supplement. IOF. Preprint, no. 247, 1985, 22 p. (RZFZA, 86/5L1018).
- 210. Zolot'ko, A.S.; Kitayeva, V.F.; Sobolev, N.N.; Fedorovich, V.Yu.; Shtykov, N.M. (FIAN). Photoinduced periodic grating in a cholesteric liquid crystal. ZFPRA, vol. 43, no. 10, 1986, 477-479.

## 2. Frequency Conversion

- 211. Achilles, D.; Lauth, H.; Fehlau, G. (). Layered device for surface antireflection coating of optical elements for frequency doubling. Patent GDR, no. 226395, 21 Aug 1985. (RZRAB, 86/5Ye487).
- 212. Aleksandrov, K.S.; Aleksandrovskiy, A.S.; Karpov, S.V.; Lukinykh, V.F.; Myslivets, S.A.; Popov, A.K.; Slabko, V.V. (IFSOAN). Frequency mixing and generation of tunable vacuum UV radiation in naphthalene vapor. IFSOAN. Preprint, no. 362F, 1985, 13 p. (RZFZA, 86/6L1081).

- 213. Apanasevich, P.A.; Zaporozhchenko, V.A.; Zaporozhchenko, R.G.; Kachinskiy, A.V.; Mukha, V.A.; Pilipovich, I.V.; Chekhlov, O.V. (IFANB). Laws governing intracavity second harmonic generation. KVEKA, no. 6, 1986, 1132-1137.
- 214. Apanasevich, P.A.; Zaporozhchenko, V.A.; Kachinskiy, A.V.; Pilipovich, I.V.; Chekhlov, O.V. (JFANB). Correlation measurements of phase modulation in intracavity frequency doubling of ultrashort pulses. IANFA, no. 6, 1986, 1155-1157.
- 215. Belinskiy, A.V.; Tagiyev, Z.A.; Chirkin, I.S. (MGU). Nonlinear conversion of optical frequencies in a randomly inhomogeneous resonator. KVEKA, no. 5, 1986, 1050-1053.
- 216. Butylkin, V.S.; Yenikeyev, R.Sh.; Fisher, P.S.; Khabarov, V.V. (IRE). Efficient stimulated emission of the first Stokes component by stimulated Raman scattering in a selective optical delay line. KVEKA, no. 5, 1986, 1053-1055.
- 217. Kazak, N.S.; Miklavskaya, Ye.M.; Sergiyenko, M.I. (). Second harmonic generation of laser emission under the noncollinear interaction of ultrasonic diffracted light waves. ZPSBA, v. 44, no. 5, 1986, 761-769.
- 218. Mironov, G.V.; Popov, A.K.; Slabko, V.V. (IFSOAN). Compensation of inhomogeneous nonlinear phase mismatch by frequency mixing in gaseous media. KVEKA, no. 6, 1986, 1138-1144.

- 219. Popov, A.K. (). Nonlinear conversion of light in gases. Applications in spectroscopy. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 1. Tomsk, 1986, 96-119.
- 220. Sartakov, B.G. (IOF). Third harmonic generation from resonant interaction of radiation and molecules. IOF. Preprint, no. 295, 1985, 21 p. (RZFZA, 86/5L1213).
- 221. Shangin, V.A.; Yankeleva, I.I. (). Measurement of the nonlinearity of receivers of optical radiation by a light summing method. IZTEA, no. 6, 1986, 34-35.
- 222. Stramska, H. (). Magnetooptic effects on third harmonic generation in semiconductors. PSSBB, v. B131, no. 1, 1985, K77-K79. (RZFZA, 86/5L1214).
- Volosov, V.D. (GOI). Wide-angle nonlinear converters of laser frequency. GOI. Trudy, no. 192, 1985, 145-154. (RZFZA, 86/6L1077).

## 3. Parametric Processes

- 224. Antipov, V.B. (). Transmission characteristics and stability of a parametric frequency converter. RAELA, no. 5, 1986, 935-937.
- 225. Bolotskikh, L.T.; Popkov, V.G.; Popov, A.K.; Shalayev, V.M. (IFSOAN). Degenerate multiphoton parametric scattering of infrared radiation at vibration-rotational molecular transitions. KVEKA, no. 5, 1986, 942-949.
- 226. Draganov, A.B.; Kalmykov, A.M. (). Parametric frequency upconversion of electromagnetic waves in a relativistic electron flow in a magnetized plasma. UFIZA, no. 12, 1985, 1799-1802. (RZRAB, 86/5Ye166).
- 227. Kryuchkov, G.Yu. (IFI). Correlation of photons in parametric wave mixing. IFI. Preprint, no. 13, 1985, 20 p. (RZFZA, 86/5L1007).
- 228. Shalayev, V.M.; Yakhnin, V.Z. (). Parametric resonance in molecules with electrooptical anharmonism. OPSPA, vol. 60, no. 5, 1986, 943-947.

### 4. Stimulated Scattering

- a. Miscellaneous Scattering
- b. Raman

- 229. Arutyunyan, G.V.; Dzhotyan, G.P.; Minasyan, L.L. (NIIFL). Theory of stimulated Raman scattering by anharmonic vibrations in a medium. VINITI. Deposit, no. 8938-V, 26 Dec 1985, 123-129. (RZFZA, 86/6L1097).
- 230. Bunkin, A.F.; Galumyan, A.S.; Zhumanov, Kh.A.; Mal'tsev, D.V.; Surskiy, K.O. (). Resolution of acetone and benzene Ramam-scattering wide-band structures in the 3000 cm(sup-1) range by polarization coherent anti-Stokes light scattering. OPSPA, v. 60, no. 5, 1986, 960-963.
- 231. Dmitriyev, V.G.; Konvisar, P.G.; Mikhaylov, V.Yu. (). Quasi-continuous wave high-power optical Raman lithium iodate laser. KVEKA, no. 5, 1986, 1063-1065.
- 232. Galazka, R. (). Tunable semiconductor Raman laser. Patent Poland, no. 126039, 31 Oct 1985. (RZRAB, 86/6Ye195).

- 233. Korniyenko, N.Ye.; Malyy, V.I.; Ponezha, G.V.; Ponezha, Ye.A. (). Anti-Stokes Raman scattering on polaritons in liquids. OPSPA, vol. 60, no. 6, 1986, 1171-1174.
- 234. Kravtsov, N.V.; Naumkin, N.I. (NIIYaF). Intracavity Raman radiation in compressed oxygen. KVEKA, no. 6, 1986, 1300-1301.
- 235. Mailyan, A.E.; Nersisyan, G.Ts.; Papanyln, V.O. (IFI). Raman scattering of laser emission into the far ultraviolet spectral region by helium and neon excited states. KVEKA, no. 5, 1986, 1025-1026.
  - c. Brillouin
- 236. Adkhamov, A.A. (). Stimulated Brillouin scattering of a two-mode pumping wave in a plasma flow. VINITI. Deposit, no. 1293-V, 25 Feb 1986, 9 p. (RZFZA, 86/6L1110).
- 237. Chrvatova, Z. (). Use of Brillouin scattering in optoelectronics (in English). OPAPB, no. 2, 1985, 143-147. (RZRAB, 86/6Ye302).
- 238. Gayzhauskas, E.; Krushas, V.; Nedbayev, N.Ya.; Petrenko, R.A.; Piskarskas, A.; Smil'gyavichyus, V. (VilGU). Stimulated emission of picosecond pulses under stimulated Brillouin scattering in liquids. KVEKA, no. 6, 1986, 1297-1299.
- 239. Keldysh, L.V.; Tikhodeyev, S.G. (FIAN). Intense polariton waves near the stimulated scattering threshold. FIAN. Preprint, no. 331, 1985, 53 p. (RZFZA, 86/6L1104).
- 240. Keldysh, L.V.; Tikhodeyev, S.G. (FIAN). High intensity polariton wave near the stimulated scattering threshold. ZETFA, vol. 90, no. 5, 1986, 1852-1870.
  - d. Rayleigh
- 241. Antipov, O.L.; Bespalov, V.I.; Pasmanik, G.A. (IPF). Pump-coupled generation of beams under stimulated scattering of opposed light waves. ZETFA, vol. 90, no. 5, 1986, 1577-1587.
- 242. Garova, Ye.A.; Kozlov, A.I.; Plesskiy, V.P (IRE). Theory of the photothermic generation of Rayleigh waves. AKZHA, no. 3, 1986, 310-316.

# 5. Self-focusing

- 243. Gorbunov, L.M. (). Transient self-focusing of light in a laser plasma. Problemy nelineynykh i turbulentnykh protsessov v fizike. Mezhdunarodnaya rabochaya gruppa, 2nd, Kiyev, 1983. Trudy. Part 1. Kiyev, Naukova dumka, 1985, 297-302. (RZFZA, 86/6G65).
- 244. Rubenchik, A.M.; Turitsyn, S.K. (IAESOAN).
  Self-focusing of light in a laser plasma. IAESOAN.
  Preprint, no. 295, 1985, 19 p. (RZFZA, 86/6L1132).

### 6. Acoustic Interaction

- 245. Asnis, L.N.; Ignatov, A.B.; Moskalenko, A.V.; Remizov, S.A. (GOI). Acoustooptic devices for ranging systems and information processing systems. GOI. Trudy, no. 192, 1985, 282-316. (RZFZA, 86/6A216).
- 246. Belova, G.N.; Remizova, Ye.I. (AKIN). acoustooptic effect in an unoriented layer of a nematic liquid crystal under periodic shear deformation. KRISA, no. 3, 1986, 517-521.

- 247. Bulygin, A.S.; Kulakov, A.S. (LETI). Diffraction of light by an ultrasonic wave in an isotropic crystal applicable to an acoustooptic modulator. LETI. Izvestiya, no. 351, 1985, 105-109. (RZFZA, 86/5P184).
- 248. Chaykovskiy, I.A.; Popov, Ye.A. (). Photoabsorption of ultrasound in inhomogeneous semiconductors. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 63-71.
- 249. Dmitriyev, A.L. (). Optoacoustic effect in a mercury cylindrical resonator. ZTEFA, no. 5, 1986, 921-923.
- 250. Gusev, V.E. (MGU). Synchronous interaction of nonlinear acoustic waves with thermal impulses. AKZHA, no. 3, 1986, 322-328.
- 251. Gusev, V.E.; Karabutov, A.A. (MGU). Theory of Rayleigh-wave excitation due to optical-pulse absorption in semiconductors. FTPPA, no. 6, 1986, 1070-1075.
- 252. Kitayeva, V.F.; Zharikov, Ye.V.; Chistyy, I.L. (). Properties of crystals with a garnet structure. PSSAB, v. A92, no. 2, 1985, 475-488. (RZFZA, 86/6Yel4).

- 253. Kludzin, V.V.; Preslenev, L.M.; Masyutin, A.A. (). Treatment of optical distributions by means of an acoustooptical delay line. OPSPA, vol. 60, no. 5, 1986, 1018-1022.
- 254. Lazarev, M.V.; Lemanov, V.V.; Sukharev, B.V. (FTI). Optical recording of a surface acoustic wave in lithium niobate. PZTFD, no. 12, 1986, 760-764.
- 255. Mazurkiewicz, H. (). Visualization of acoustic pulses in a modified Toepler system. ARAKB, no. 4, 1984, 347-356. (RZFZA, 86/5P72).
- 256. Preslenev, L.N.; Stashkevich, A.A. (). Nonlinear distortions in acoustooptic devices with optical heterodyning. IVUZB, no. 1, 1986, 64-68. (RZRAB, 86/5Ye24).
- 257. Pushkina, N.I. (MGU). Surface nonlinear acoustic interactions in liquids. DANKA, vol. 288, no. 1, 1986, 107-110.
- 258. Sukhorukov, A.P.; Timofeyev, V.V.; Trofimov, V.A. (MGU). Passing of a light beam through a thin layer with nonlinear and accidental phase distortions. Investigation of the possibility of compensation. IVYRA, no. 6, 1986, 667-674.
- G. SPECTROSCOPY OF LASER MATERIALS
  - 259. Aminov, L.K.; Kaminskiy, A.A.; Malkin, B.Z. (). Anisotropy of radiation intensity from activator ions in crystals. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 84-112.
  - 260. Bagdasarov, Kh.S.; Krasilov, Yu.I.; Shestakov, A.V.; Bakin, D.V.; Kevorkov, L.M.; Dorozkhin, L.M.; Kuratev, I.I.; Siyuchenko, O.G.; Potemkin, A.V. (). Spectroscopic properties of Ti(sup3) ions in aluminates. VINITI. Deposit, no. 1378-V86. (ZPSBA, v. 44, no. 5, 1986, 869).
  - 261. Eydzhyunas, G.S.; Kavalyauskas, Yu.F.; Shileyka, A.Yu (IFPV). Photoreflection of implanted B+ in Cd(sub0.27)Hg(sub0.73)Te crystals in an edge-absorption range. FTPPA, no. 5, 1986, 789-793.
- 262. Kaminskiy, A.A.; Korniyenko, A.A. ().
  Parametrization of 4f-4f transitions, allowing for virtual processes of charge transfer. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 112-124.

- 263. Levshin, L.V.; Struganova, I.A.; Toleutayev, B.N. (). Effect of relaxation processes on time and polarization fluorescence characteristics of rhodamine 6G in glycerine. ZPSBA, v. 44, no. 5, 1986, 769-776.
- 264. Mirzakhanyan, A.A.; Petrosyan, A.K. (IFI). Electron paramagnetic resonance and optical absorption for Co(sup2+) impurity ions in alpha-LiIO(sub3) and LiNbO(sub3) monocrystals. FTVTA, no. 5, 1986, 1593-1595.
- 265. Prishchepov, A.S.; Nizamov, N. (IFANB). Photoinduced optical anisotrophy of polymer films containing rhodamine 6G and its base. KHFID, no. 5, 1986, 635-642.
- 266. Raczynski, A. (). Continued fraction approach to collision-induced absorption for He+Xe (in English). ATPLB, v. A68, no. 4, 1985, 667-674. (RZFZA, 86/5D269).
- 267. Starostin, N.V. (). New aspects in the theory of crystal fields applicable to rare-earth activators. Fizika i spektroskopiya lazernykh kristallov. IKAN. Moskva, Nauka, 1986, 62-84.
- 268. Tkachuk, A.M.; Klokishner, S.I.; Poletimova, A.V.; Mogileva, L.M.; Petrov, M.V.; Podkolzina, I.G.; Semenova, T.S. (). Probability of intracenter transitions and self-quenching of luminescence in SrFe(sub2)-2ErF(sub3) and SrF(sub2)-2HoF(sub3) systems. OPSPA, v. 59, no. 6, 1985, 1239-1245.
- 269. Vas'ko, F.T. (IPANUk). Quasi-energy spectrum and anisotropic photoconduction of holes. FTPPA, no. 5, 1986, 976-970.
- H. ULTRASHORT PULSE GENERATION
  - 270. Avanesyan, S.M.; Gusev, V.E. (MGU). Excitation of ultrashort deformation pulses upon absorption of optical radiation in semiconductors. KVEKA, no. 6, 1986, 1241-1249.
  - 271. Bezrodnyy, V.I.; Tikhonov, Ye.A.; Nedbayev, N.Ya. (IFANUk). Stimulated emission of duration-controlled ultrashort pulses from a passively mode-locked YAG:Nd3+ laser. KVEKA, no. 6, 1986, 1214-1219.
- 272. Dianov, Ye.M.; Karasik, A.Ya.; Prokhorov, A.M.; Serkin, V.N. (IOF). Ultrashort pulses in fiber lightguides. IANFA, no. 6, 1986, 1042-1049.

- 273. Kocharovskaya, O.A.; Khanin, Ya.1. (IPF). Population trapping and coherent bleaching by a recurring ultrashort pulse train in a three-level medium. ZETFA, vol. 90, no. 5, 1986, 1610-1618.
- 274. Onishchukov, G.I.; Stel'makh, M.F.; Fomichev, A.A. (MFTI). Picosecond radiation sources using c-w pumped garnet lasers. IANFA, no. 6, 1986, 1117-1122.
- 275. Piskarskas, A.; Smil'gyavichyus, V.; Umbrasas, A.; Yuodishyus, I. (VilGU). Parametric oscillation of picosecond light pulses in a LiNbO(sub3) crystal at a repetition rate of up to 10 kHz. KVEKA, r., 6, 1986, 1281-1284.
- 276. Varnavskiy, O.P.; Golovlev, V.V.; Kirkin, A.N.; Malikov, R.F.; Mozharovskiy, A.M.; Benedikt, M.G.; Trifonov, Ye.D. (FIAN). Coherent propagation of small area pulses in activated crystals. ZETFA, vol. 90, no. 5, 1986, 1596-1609.
- 277. Vasilyauskas, V.; Piskarskas, A.; Sirutkaytis, V.; Stabinis, A.; Yankauskas, A. (VilGU). Generation of high-power femtosecond light pulses in media with square-law nonlinearity. IANFA, no. 6, 1986, 1075-1086.

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CENTRAL COCCESSES.

HANKE

278. Vysloukh, V.A.; Dovchenko, D.N.; Zheludev, N.I.; Kuznetsov, V.I.; Muradyan, L.Kh.; Simonov, A.V. (MGU). Subpicosecond pulse shaping with a high frequency repetition rate in a fiberoptic compressor. IANFA, no. 6, 1986, 1220-1224.

- 279. Vysloukh, V.A.; Matveyeva, T.A. (MGU). Two-stage pulse compression in the near infrared region. KVEKA, no. 5, 1986, 1020-1021.
- 280. Zaporozhchenko, V.A.; Kachinskiy, A.V.; Rakush, V.V.; Stavrov, A.A.; Tylets, N.A. (IFANB). Emission of short light pulses by a laser with a short variable cavity Q-factor. PRTEA, no. 3, 1986, 180-182.

- J. CRYSTAL GROWING
- K. THEORETICAL ASPECTS OF ADVANCED LASERS
- 281. Bessonov, Ye.G. (FIAN). Effect of quantum fluctuations in synchrotron radiation on particle dynamics in high-energy microtrons. FIAN. Preprint, no. 340, 1985, 8 p. (RZFZA, 86/6V441).
- 282. Ginzburg, N.S. (IPF). Nonlinear theory of a relativistic cyclotron resonance maser with resonance electrodynamical systems. IVYRA, no. 6, 1986, 728-739.
- 283. Kokhman'ski, S.; Kulish, V. (). Nonlinear theory of free electron lasers with multifrequency pumping (in Russian). ATPLB, v. A68, no. 5, 1985, 741-748. (RZFZA, 86/6L873).
- 284. Kokhman'ski, S.; Kulish, V. (). Nonlinear theory of free electron lasers (in Russian). ATPLB, v. A68, no. 5, 1985, 749-753. (RZFZA, 86/6L874).
- 285. Lebedev, A.N.; Martirosyan, G.V.; Sharafyan, V.R. (FIAN). Radiation acceptance of an undulator. ZTEFA, no. 6, 1986, 1130-1136.
- 286. Lukin, K.A.; Shestopalov, V.P. (). Theory of nonlinear phenomena in diffraction radiation oscillators, that is, free electron lasers. Problemy nelineynykh i turbulent nykh protsessov v fizike. Mezhdunarodnaya rabochaya gruppa, 2nd, Kiyev, 1983. Trudy. Part 1. Kiyev, Naukova dumka, 1985, 369-373. (RZFZA, 86/6L866).
- 287. Varfolomeyev, A.A.; Pitatelev, M.M. (IAE). Stimulated magnetic bremsstrahlung of electrons in fields of an undulator and a driving axial field. ZTEFA, no. 5, 1986, 856-867.
- 288. Zal'mezh, V.F.; Nikitin, M.M.; Epp, V.Ya. ().
  Obtaining an arbitrary polarization mode of undulator radiation. VINITI. no. 191-V, 8 Jan 1986, 13 p. (RZFZA, 86/5V655).
- 289. Zal'mezh, V.F.; Nikitin, M.M.; Epp, V.Ya. (). Effect of the number of rotations of an electron beam in a synchrotron on the spectrum of undulator radiation. IVUFA, no. 9, 1985, 107-109. (RZFZA, 86/5V610).

### L. GENERAL LASER THEORY

- 290. Antipenko, B.M.; Voronin, S.P.; Mayboroda, V.F.; Privalova, T.A. (). Influence of excitation summing on the efficiency of laser action in sensitized materials. KVEKA, no. 5, 1986, 980-988.
- 291. Arkhipova, Z.L.; Mit'kin, V.M.; Reshetnikov, V.I. (GOI). Dynamics of mutual compensation of initial and thermally induced optical inhomogeneities in an active element. OPMPA, no. 11, 1985, 56-58.
- 292. Bonch-Bruyevich, A.M. (biographical subject) (GOI). Aleksey Mikhaylovich Bonch-Bruyevich on his seventieth birthday. OPMPA, no. 5, 1986, 61-62.
- 293. Bonch-Bruyevich, A.M. (biographical subject) (). Aleksey Mikhaylovich Bonch-Bruyevich on his seventieth birthday. OPSPA, vol. 60, no. 6, 1986, 1299-1300.
- 294. Borisov, Ye.N.; Penkin, N.P.; Red'ko, T.P. (LGU). 5(sup3)P(subj) transitions among components of thin structures of an atom of strontium during collisions with argon atoms. KHFID, no. 5, 1986, 605-608.
- 295. Brunner, W. (Brunner, V.); Fischer, R. (Fisher, R.); Paul, H. (Paul', Kh.) (all from GDR). (). Spectral and dynamic characteristics of multimode lasers. IANFA, no. 6, 1986, 1172-1175.
- 296. Bulyshev, A.Ye.; Kurbatov, A.A.; Preobrazhenskiy, N.G.; Suvorov, A.Ye. (ITPM). Statistical modeling of radiation capture in multilevel systems. ITPM. Preprint, no. 39, 1985, 34 p. (RZFZA, 86/6L822).
- 297. Csillag, L.; Kroo, N. (). New materials in optics. MGTDA, no. 9, 1985, 676-687. (RZFZA, 86/5L774).
- 298. Miroshnikov, M.M.; Lebedev, A.A. (biographical subject). (GOI). Academician A.A. Lebedev (1893-1983), a prominent Soviet scientist. GOI. Trudy, no. 192, 1985, 5-24. (RZFZA, 86/6A22).
- 299. Moskalenko, V.A.; Dogotar', L.A. (). Development of theoretical physics in Moldavia from 1961 to 1985. IZFMB, no. 2, 1986, 3-15.
- 300. Nikolayev, G.N.; Rautian, S.G. (IAESOAN).
  Magnetooptic resonances in fluorescence induced by the
  "wind effect". KVEKA, no. 5, 1986, 1027-1030.

- 301. Pirogov, Yu.A. (MGU). Structural invariant and transient properties of multilayer interference systems. IANFA, no. 6, 1986, 1187-1190.
- 302. Prokhorov, A.M. (). Twenty-fifth anniversary of the laser. UFNAA, v. 148, no. 1, 1986, 3-6. (RZRAB, 86/6Yel).
- 303. Rebane, K.K. (biographical subject). (IFANEst). Karl Karlovich Rebane on his sixtieth birthday. ZPSBA, v. 44, no. 5, 1986, 871-872.
- 304. Rebane, K.K. (biographical subject) (). Karl Karlovich Rebane on his seventieth birthday. OPSPA, vol. 60, no. 6, 1986, 1300-1301.
- 305. Stepanov, A.I. (GOI). Solid state periodic pulsed lasers. GOI. Trudy, no. 192, 1985, 174-182. (RZFZA, 86/5L1305).
- 306. Trzesowski, Z. (). Waveguide lasers. EKNTB, no. 7, 1985, 3-9,1,2. (RZRAB, 86/6Ye371).

307. Zhuk, I.P. (IPFANBel). Phase transitions of elements and compounds. Part 3. INFZA, v. 50, no. 6, 1005-1007.

#### II. LASER APPLICATIONS

#### B. BIOLOGICAL EFFECTS

- 308. Aleksandrov, M.T.; Bezchinskaya, M.Ya.; Klimova, L.A.; Yevstigneyev, A.R.; Chavchanidze, T.O. (PMMI). Principles of low-intensity laser therapy based on the use of biophotometry. VORLA, no. 3, 1986, 54-56.
- 309. Avdeyev, P.S.; Bakuyev, A.A.; Berezin, Yu.D.; Volkov, V.V.; Gudakovskiy, Yu.P.; Mak, A.A.; Tovbin, B.S.; Ushkova, I.N.; Shanichev, G.Ya. (). A method of medical treatment for eye diseases. OTIZD, no. 17, 1986, 1228846.
- 310. Bikbayeva, A.I.; Sharipov, R.A. (BashMI). Low-energy laser radiation in comprehensive therapy of ozena patients. VORLA, no. 3, 1986, 59-61.
- 311. Gamaleya, N.F.; Pishko, Ye.D.; Yanish, Yu.V. (IPOnk). Mechanism of laser biostimulation. Facts and hypotheses. IANFA, no. 5, 1986, 1027-1032.
- 312. Gayduk, M.I.; Grigor'yants, V.V.; Mironov, A.F.; Roytman, L.D.; Rumyantseva, V.D. (). Spectral-luminescent investigation of pyrrole [3,2-f] indolizines by laser fiber-optic methods. ZPSBA, v. 44, no. 5, 1986, 785-790.
- 313. Golubenko, Yu.V.; Yevstigneyev, A.R.; Shpigel'man, S.D.; et al. (). Laser treatment of ulcers of the stomach, allowing for the optical properties of the afflicted part. SOMEA, no. 12, 1985, 34-37. (LZSTA, 26/86, 95458).
- 314. Kovarskiy, V.A.; Filipp, B.S. (). Development of molecular biophysics in the Academy of Sciences Moldavian SSR. IZFMB, no. 2, 1986, 20-25.
- 315. Machkova, N.A.; Ushkova, I.N.; Berman, A.L. (). Change in the regeneration of rhodopsin in the retina of the rabit under low-energy laser radiation. GTPZA, no. 11, 1985, 43-44. (LZSTA, 22/86, 80386).
- 316. Ostrovskiy, A.V.; Pleshanov, P.G.; Fokin, V.S.; Sharov, V.A. (IBFiz). Dynamics of biopolymer structure by a kinetic spectrofluorometry method. KVEKA, no. 6, 1986, 1175-1179.
- 317. Priyezzhev, A.V. (MGU). Laser biophysics of cell mobility. IANFA, no. 6, 1986, 1134-1138.

- Ryazantseva, T.A.; Kamova, N.N.; Groppa, L.; (). Determining the rheumatoid factor by laser nephelometry. Laboratornoye delo, no. 11, 1985, 700-701. (LZSTA, 23/86, 84074).
- Timen, G.E.; Vinnichuk, P.V. (KNIIO). Laser therapy of patients with nasal furuncle. ZUNBA, no. 3, 1986,
- 318. Ryazantseva, T.A.;
  Mitrofanova, T.A.
  factor by laser ne
  11, 1985, 700-701.

  319. Timen, G.E.; Vinni
  of patients with n
  6-9.

  320. Tupelekin, V.N. (
  instruments in las
  gastro-intestinal
  novyve metody lech
  (Early diagnostics
  clinical surgery).
  26/86, 95606).

  B. COMMUNICATIONS SYS'

  321. Abdiyev, S.; Kubysi
  Device for excitat
  no. 41, 1985, 1190.

  322. Abdullayev, S.S.;
  Khabibullayev, P.K.
  dislocations of the
  field transmitted
  KVEKA, no. 5, 1986

  323. Akhmadiyev, A.G.;
  (GOI). Current st.
  development of opt
  no. 6, 1986, 51-56

  324. Akhmadzhanov, T.;
  transverse laser m
  radiation passing
  no. 12, 1985, 50-5.

  325. Andonovski, A.; Bal
  (). Optical anisot
  Macedonian). Godis
  Univerzitetski cent
  univerzitetski cent
  univerzitetot vo Sk
  (RZFZA, 86/5L859).

  326. Andreyev, Yu.V. ()
  fibers. OTIZD, no.
  86/6Ye305).

  327. Andriyesh, A.M. ()
  qlasses for optical
  43-50. (). Using special surgical instruments in laser operations on the gastro-intestinal tract. Rannyaya diagnostika i novyye metody lecheniya v klinicheskoy khirurgii (Early diagnostics and new treatment methods in clinical surgery). Cheboksary, 1985, 26-29.

### COMMUNICATIONS SYSTEMS

- Abdiyev, S.; Kubyshkin, V.A.; Yenikeyeva, K.Sh. Device for excitation of fiber lightguides. no. 41, 1985, 1190332. (RZRAB, 86/6Ye245).
- Abdullayev, S.S.; Akhmadzhanov, T.; Tashpulatov, Z.T.; Khabibullayev, P.K. (IYaFANUz). Distribution of dislocations of the wavefront of a laser radiation field transmittted through a fiber-optic wavequide. KVEKA, no. 5, 1986, 1042-1044.
- Akhmadiyev, A.G.; Belotserkovskiy, E.N.; Patlakh, A.L. (GOI). Current state and perspectives on the development of optical fiber level converters. no. 6, 1986, 51-56.
- Akhmadzhanov, T.; Mirzayev, A.T. (). Effect of transverse laser modes on the time coherence of radiation passing through a fiber lightguide. IVUZB, no. 12, 1985, 50-51. (RZRAB, 86/5Ye250).
- Andonovski, A.; Bahcevanciev, S.; Milosavlevski, Z. Optical anisotropy of optical fibers (in Macedonian). Godisen zbornik. Fakultet za fizika. Univerzitetski centar za matematicko-tehnicki nauki na univerzitetot vo Skopje, vol. 34, 1984, 121-128.
- Andreyev, Yu.V. (). Device for adjusting optical fibers. OTIZD, no. 42, 1985, 1191860. (RZRAB,
- Andriyesh, A.M. (). The properties of chalcogenic glasses for optical waveguides. IZFMB, no. 2, 1986,

- 328. Andriyesh, A.M.; Bol'shakov, O.V.; Kulyak, I.P.; Kulakov, Ye.V.; Ponomar', V.V.; Smirnova, A.S. (). Absorption of light in chalcogeninde glass fibers. Khal'kogenidnyye poluprovodniki. Kishinev, 1985, 69-74. (RZFZA, 86/5L853).
- 329. Andriyesh, A.M.; Ponomar', V.V.; Smirnov, V.L.; Mironos, A.V. (IPFANM; MIFI). Chalcogenide glass in integrated and fiber optics (review article). KVEKA, no. 6, 1986, 1093-1117.
- 330. Bagdasarova, O.V.; Kurchinskaya, L.N. (). Fiber lightguide optical system for transferring images. IVUBA, no. 1, 1986, 82-84. (RZRAB, 86/5Ye402).
- 331. Baskakova, Z.A. (). Prospects for the use of lightguide communications in power engineering. Peredacha informatsii v energo-sistemakh. Moskva, 1986, 3-8. (RZRAB, 86/6Ye645).
- 332. Bondarev, L.A.; Budagyan, I.F.; Golovchenko, G.S.;
  Dubrovin, V.F.; Mirovitskiy, D.I.; Smyk, A.F.
  (MIREA). Method to determine the field-form factor of modes at the end-face of a circular optical waveguide.
  OTIZD, no. 44, 1985, 1195294. (RZRAB, 86/5Ye418).
- 333. Boness, R.; Tolksdorf, D. (). Numerical method to calculate the field strength in graded-index lightguides. NACHA, no. 1, 1986, 37-38. (RZRAB, 86/5Ye221).
- 334. Borisov, M.; Konstantinov, L.; Zartov, G.; Subotinov, N. (). Current trends in optoelectronics (in Bulgarian). SPBAA, no. 5, 1985, 17-25. (RZFZA, 86/6L647).

- 335. Braun, J.; Kostka, F.; Pechlat, M.; Kuncova, G. (). Microcomputer control of a device for drawing out optical fibers. SLOZA, no. 1, 1986, 23-27. (RZRAB, 86/6Ye467).
- 336. Brehm, P. (). Information transmission over lightguide cables. Elektronkabel, no. 1, 1985, 13-16. (RZRAB, 86/6Ye425).

SEED SECURIAL PROPERTY SECURIAL SECURIAL SECURIAL VISION SECURA

- 337. Brode, F. (). Method for reproducible measurements of multimode lightguides. Elektronkabel, no. 1, 1985, 25-29. (RZRAB, 86/6Ye363).
- 338. Brode, F. (). Lightguides for short-distance transmission. Elektronkabel, no. 1, 1985, 17-18. (RZRAB, 86/6Ye424).

- 339. Bruk, M.R.; Kravtsov, Yu.A.; Minchenko, A.I. (IOF). Temperature phase sensitivity of fiber lightguides. IANFA, no. 6, 1986, 1167-1171.
- 340. Brunke, W. (). Lightguide coupling technology. Elektronkabel, no. 1, 1985, 19-22. (RZRAB, 86/6Ye347).
- 341. Bukhinnik, A.Yu. (). Criterion for estimating the optimal parameters of lightguide communication lines in terms of energy store. Obrabotka informatsii v sistemakh svyazi. EIS. Leningrad, 1985, 54-61. (RZFZA, 86/6Zh352).
- 342. Bulavko, A.A.; Kovtyak, D.S.; Kolpashchikov, V.L.; Kuchinskiy, G.S.; Khramtsov, P.P. (). Automatic system for controlling the industrial process for forming fiber lightguides. Teplo i massoperenos: itogi i perspektivy. Minsk, 1985, 108-110. (RZRAB, 86/5Ye449).

- 343. Bykovskiy, Yu.A.; Dedushenko, K.B.; Zverkov, M.V.; Ivanova, Ye.B.; Likhachev, I.G.; Mamayev, A.N.; Smirnov, V.L. (MIFI). Optical signal transmission with a frequency-switched carrier. KVEKA, no. 5, 1986, 1061-1062.
- 344. Csocsan, L. (). Problems in the use of fiberoptics (in Hungarian). Muszerugyi es merestechnika kozlemeny, no. 39, 1985, 23-28. (RZFZA, 86/6L648).
- 345. Davidenko, V.F.; Ploshay, L.L.; Chertov, V.G. (). Method for controlling the alignment of fiber lightguides. OTIZD, no. 45, 1985, 1196792. (RZRAB, 86/6Ye336).
- 346. Dianov, Ye.M.; Nikonova, Z.S.; Prokhorov, A.M.; Serkin, V.N. (IOF). Spectral filtration of multi-soliton pulses. PZTFD, no. 12, 1986, 752-755.
- 347. Dianov, Ye.M.; Nikonova, Z.S.; Prokhorov, A.M.; Serkin, V.N. (IOF). Optimal compression of multi-soliton pulses in optical waveguides. PZTFD, no. 12, 1986, 756-760.
- 348. Domrachev, S.I. (). Effect of the gap between an optical waveguide and periodic system on the diffraction of waveguide modes. IVUZB, no. 2, 1986, 103-104. (RZRAB, 86/6Ye328).
- 349. Eberlein, D.; Hansel, G. (). Low-feedback coupler for lightguide plug connections. Patent GDR, no. 226396, 21 Aug 1985. (RZRAB, 86/6Ye322).

- 350. Eberlein, D.; Leidenberger, C. () Device to obtain a mode equilibrium distribution in parabolic profiled lightguides. Patent GDR, no. 226665, 28 Aug 1985. (RZRAB, 86/5Ye415).
- 351. Fradin, A.Z.; Braude, V.B.; Vaysleb, Yu.V. (). Calculating the excitation efficiency of dielectric lightguides during their end-face coupling. Obrabotka informatsii v sistemakh svyazi. Leningrad, 1985, 78-82. (RZFZA, 86/5L849).
- 352. Glebov, L.B.; Mishin, A.V.; Nikonorov, N.V.; Petrovskiy, G.T. (GOI). Waveguide effects in glass substrates. GOI. Trudy, no. 192/2, 1958, 157-165. (RZFZA, 86/6L64).
- 353. Gofman, M.; Morozov, V.N.; Pletnev, V.A.; Pukhta, M. (FIAN). Field distribution in diffusion strip LiNbO(sub3) waveguides at the wavelength of 1.3 um. KVEKA, no. 5, 1986, 1055-1058.
- 354. Golubkov, V.S.; Yevtikhiyev, N.N.; Ivanov, N.N.; Papulovskiy, V.F. (MIREA). Device for controlling inhomogeneities of planar optical waveguides. OTIZD, no. 41, 1985, 1190331. (RZRAB, 86/5Ye421).
- 355. Goncharenko, I.A. (IRE). Three-layer fiber-optic waveguides with an anisotropic core and elliptical inner cladding. KVEKA, no. 5, 1986, 1030-1033.
- 356. Gorbachev, O.V.; Gorchakov, A.P.; Zhilinskiy, A.P.; Oborotov, V.A. (MEIS). Acoustic sensor for monitoring fiberoptic lightguides. OTIZD, no. 19, 1986, 1233034.
- 357. Grigor'yants, V.V.; Ivanov, G.A.; Isayev, V.A.; Chamorovskiy, Yu.K. (IRE). Cutoff wavelength in real-time single-mode fiber-optic waveguides. KVEKA, no. 5, 1986, 956-961.
- 358. Gur'yanov, A.N.; Gusovskiy, D.D.; Dianov, Ye.M.; Karasik, A.Ya.; Kozlov, V.A.; Senatorov, A.K. (IOF). Depolarization of radiation in irregular single mode waveguides. ZTEFA, no. 6, 1986, 1227-1229.
- 359. Joerges, U. (). Analytical dispersion equation for single-mode lightguides with a graded index profile. NACHA, no. 1, 1986, 28-30. (RZRAB, 86/6Ye262).
- 360. Kevorkijan, V. (). Obtaining preforms for extracting optical fibers by side chemical deposition (in Serbo-Croation). TEHBA, no. 11, 1985, 1645-1649. (RZFZA, 86/6L688).

- 361. Kevorkijan, V. (). Modified chemical vapor deposition technology for obtaining optical fibers (in Serbo-Croation). TEHBA, no. 10, 1985, 1494-1498. (RZFZA, 86/6L694).
- 362. Khaytun, F.I. (GOI). Selecting the number of radiated pulses to detect fluctuating optical signals. OPMPA, no. 11, 1985, 6-8.
- 363. Khoruzhnikov, S.E. (). Mathematical model of the modified chemical vapor deposition method [for fabricating fiber lightguides]. Energoperenos v konvektivnykh potokakh. Minsk, 1985, 90-109. (RZRAB, 86/6Ye469).
- 364. Kizevetter, D.V.; Malyugin, V.I. (). Signal distortion while coupling a semiconductor laser to a fiberoptic communication line. IVUZB, no. 1, 1986, 75-77. (RZRAB, 86/5Ye312).
- 365. Klein, G. (). Microoptic assemblies with lens systems for lightguides. FGRTA, no. 12, 1985, 532-534. (RZRAB, 86/6Ye377).
- 366. Kleinert, P.; Kirchhof, J.; Schmidt, D. ().
  Preparation of high-purity glasses by chemical vapor
  deposition with well-defined profiles of refractive
  index (in English). CISHPMST, 6th, Dresden, 6-10 May
  1985. Proceedings 1. Plenary papers/Preparat.
  Oberlungwitz, 1985, 107-121. (RZFZA, 86/5L80).
- 367. Kolpashchikov, V.L.; Lanin, Yu.I.; Martynenko, O.G.; Shnip, A.I. (). Effect of temperature conditions on the stability of the drawing of an optical fiber. ZPMFA, no. 3, 1986, 105-112.
- 368. Kuka, G. (). Damping coefficient and bandwidth of multimode lightguides. Elektronkabel, no. 1, 1985, 30-32. (RZRAB, 86/6Ye274).
- 369. Kuka, G.; Urban, J.; Wurbs, G. (). Measuring method to determine mode coupling coefficients in lightguides. Patent GDR, no. 224935, 17 Jul 1985. (RZRAB, 86/5Ye414).
- 370. Kukharev, A.V.; Lipovskiy, A.A.; Aksenov, Ye.T.; Pavlenko, A.V. (). Study on integrated optical coupling elements using a two-dimensional graded index. OPSPA, v. 59, no. 6, 1985, 1281-1285.
- 371. Lippmann, W. (). Device for equilibrium distribution of modes in lightguides. Patent GDR, no. 225236, 24 Jul 1985. (RZRAB, 86/6Ye353).

- 372. Mar'yenkov, A.A.; Sinkevich, V.I.; Uryadov, V.N. (). Determining the optimal coefficient of pre-emphasis in transmitting wideband analog signals over optical cables. RELED, no. 14, 1985, 17-20. (RZRAB, 86/5Ye363).
- 373. Martynova, T.A.; Cherenkov, G.A. (). Mathematical models for searching for elements for high-speed systems to transmit information. MTRLB, no. 6, 1986, 3-10.
- 374. Milinkis, B.M.; Tikhonov, A.V. (). A device for the reproduction of a mechanical sound track. Author's certificate, no. 1176380. (TKTEA, no. 6, 1986, 16).
- 375. Morshnev, S.K.; Ryabov, A.S.; Frantsesson, A.V. (). Optical waveguides for sharp bend sensors. RAELA, no. 5, 1986, 1010-1014.
- 376. Mueller, K.; Kuka, G.; Manthe, H. (). Device for applying the primary layer on lightguides. Elektronkabel, no. 1, 1985, 10-12. (RZRAB, 86/6Ye472).
- 377. Nechayev, Ye.P. (). Combined detection and estimation of the duration of an optical signal. OTPIA, no. 74, 1986, 37-41. (RZFZA, 86/6L657).
- 378. Nowak, W.; Rossner, S. (). Eliminating the effect of leaky modes in near-field measurement of the refractive index profile of lightguides. NACHA, no. 1, 1986, 30-32. (RZRAB, 86/6Ye261).
- 379. Pochapskiy, Ye.P. (FMIANUk). Combined algorithm for estimating the intensity of weak light signals. VINITI. Deposit, no. 1240-V, 21 Feb 1986, 138-141. (RZFZA, 86/6L656).
- 380. Pomazov, V.V.; Dement'yev, S.A. (). Device for coupling optical fibers. OTIZD, no. 45, 1985, 1196794. (RZRAB, 86/6Ye341).
- 381. Romaniuk, R. (). Second International Conference on Lightguide Sensors, Stuttgart, 5-7 Oct 1984. EKNTB, no. 3, 1985, 28-32. (RZFZA, 86/5L869).
- 382. Rudenko, I.P. (). Radiation fields in gradient open waveguides with variable thickness. RAELA, no. 5, 1986, 1018-1021.
- 383. Sachko, Yu.I.; Skarzhepa, V.A. (KPIA). Beam study on lightguides. UkrNIINTI. Deposit, no. 515-Uk, 11 Feb 1986, 11 p. (RZRAB, 86/6Ye358).

- 384. Shevchenko, V.V. (). Shift formulae methods in the theory of dielectric waveguides and optical fibers (review article). RAELA, no. 5, 1986, 849-864.
- 385. Shiganov, S.A. (FMIANUk). Results of studies on optical channels and signals. VINITI. Deposit, no. 1240-V, 21 Feb 1986, 164-166. (RZFZA, 86/6L658).
- 386. Skarzhepa, V.A.; Sachko, Yu.I. (KPIA). Fabrication of lightguides with active control of the geometric optical characteristics. UkrNIINTI. Deposit, no. 516-Uk, 11 Feb 1986, 14 p. (RZRAB, 86/6Ye452).
- 387. Skoromnik, D.E.; Kolpashchikov, V.L. (). Coupled waveguides in integrated-optical devices. Energoperenos v konvektivnykh potokakh. Minsk, 1985, 110-118. (RZFZA, 86/6L68).
- 388. Surazynski, L.; Szustakowski, M. (). Propagation of electromagnetic waves in two mutually coupled multimode electrooptic waveguides. BWATA, no. 8, 1985, 43-51. (RZFZA, 86/6L55).
- 389. Surazynski, L.; Szustakowski, M. (). Analysis of electromagnetic wave propagation in an electrooptic multimode waveguide (in English). OPAPB, no. 2, 1985, 171-186. (RZRAB, 86/6Ye272).
- 390. Svakhin, A.S.; Sychugov, V.A. (IOF). Study on the properties of metal and oxide films obtained by magnetron sputtering. IOF. Preprint, no 209, 1985, 32 p. (RZFZA, 86/6L29).

- 391. Tikhomirov, S.V.; Khleskova, T.N. (). Measurement of dispersion characteristics of optical fiber waveguides. IZTEA, no. 6, 1986, 25-30.
- 392. Tomanek, P. (). Measuring the time and spectral changes in damping in optical fiber due to OH ion diffusion. JMKOA, no. 9, 1985, 243-245. (RZFZA, 86/5L855).
- 393. Urban, J.; Kuka, G.; Wurbs, G. (). Method and device to determine damping coefficients in lightguides. Patent GDR, no. 227243, ll Sep 1985. (RZRAB, 86/6Ye361).
- 394. Vazsonyi, E. (). Introduction to high-resolution optical lithography. FNMKA, no. 4-5, 1985, 97-101,159,160. (RZRAB, 86/6Ye636).

- 395. Viergutz, H. (). Current status and developmental trends in lightguide cable technology. Elektronkabel, no. 1, 1985, 1-2. (RZRAB, 86/6Ye295).
- 396. Volotovskaya, N.K.; Tyutikova, L.A. (). Polarization effects on dispersion in multimode graded-index lightguides. Obrabotka informatsii v sistemakh svyazi. EIS. Leningrad, 1985, 50-53. (RZFZA, 86/6Zh336).
- 397. Vysloukh, V.A.; Fattakhov, A.M. (MGU). Nonlinear compensation of random pulse dispersional broadening. IVYRA, no. 5, 1986, 545-550.
- 398. Weselhoefft, R. (). Polymers as materials for lightguide fibers. Elektronkabel, no. 1, 1985, 7-9. (RZRAB, 86/6Ye473).
- 399. Wringe, H. (). Technology for drawing out lightguides for lightguide information transmission. Elektronkabel, no. 1, 1985, 3-6. (RZRAB, 86/6Ye471).
- 400. Wurbs, G.; Kuka, G. (). Interferometric testing of lightguide preforms. Elektronkabel, no. 1, 1985, 23-24. (RZRAB, 86/6Ye468).
- 401. Yakhkind, A.K.; Kozmanyan, A.A.; Ovcharenko, N.V. (GOI). Relaxation processes in graded-index glasses obtained by ion exchange. GOI. Trudy, no. 192/2, 1985, 173-181. (RZRAB, 86/6Ye268).
- 402. Yeliseyev, P.G.; Pham Van Hoi (Fam Van Khoy) (FIAN). Perforation of a thin-film recording medium by the sharp-focused emission of a GaAlAs/GaAs laser. KVEKA, no. 6, 1986, 1261-1264.
- 403. Yezhov, V.A. (). Coherent optical correlator with combined modulation of the spatial carrier. RAELA, no. 2, 1986, 298-307.
- 404. Zubyuk, G.G.; Ivachevskiy, A.I.; Vul'chin, Yu.G.; Smereka, A.S. (GOI). Treatment method for the ends of optical fibers. OPMPA, no. 6, 1986, 39-41.

O'SERRI RESERT ROSSI SONS SONS

## C. BEAM PROPAGATION

### 1. Theory

- 405. Bejtulahu, R.; Jonoska, M.; Janikijevik, Lj. ().
  Relationship and difference between diffraction and interference phenomena in interference systems (in Macedonian). Godisen zbcrnik. Fakultet za fizika.
  Univerzitetski centar za matematicko-tehnicki nauki na univerzitetot vo Skopje, vol. 34, 1984, 15-24.
  (RZFZA, 86/5L11).
- 406. Bel'skiy, A.M.; Shalin, O.Yu. (BGU). Total internal reflection of Gaussian beams from a multilayer structure. VBMFA, no. 1, 1986, 17-21. (RZFZA, 86/5L15).
- 407. Bersenev, V.I.; Gordiyenko, V.M.; Kurochkin, N.N.; Logutko, A.L.; Priyezzhev, A.V.; Putivskiy, Yu.Ya.; Savin, V.I.; Samorodov, Yu.D. (MGU). Remote laser Doppler diagnostics of aerosol flows. IANFA, no. 6, 1986, 1225-1228.
- 408. Dmitriyev, A.Ye.; Parshkov, O.M.; Surkin, R.I. (). Transient double resonance under conditions of coherent interaction of radiation and a spectrally inhomogeneous medium. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 216-218.
- 409. Dukhovner, A.N.; Zanina, K.A. (). Coherence and its rate of change in the environment. TsNIITEIpriboro. Deposit, no. 3110-pr, 25 Nov 1985, 36-42. (RZFZA, 86/5L20).
- 410. Ivanov, A.P.; Gavrilovich, A.B.; Borisevich, M.N. (). Polarization of radiation scattered by a spherical volume of a disperse medium. VBSFA, no. 6, 1985, 71-74. (RZFZA, 86/6L75).
- 411. Janikijevik, Lj.; Jonoska, M.; Mitreska, Z. ().
  Study on interferograms of conic and elliptic waves
  (in Macedonian). Godisen zbornik. Fakultet za fizika.
  Univerzitetski centar za matematicko-tehnicki nauki na
  univerzitetot vo Skopje, vol. 34, 1984, 25-39.
  (RZFZA, 86/6L543).

- 412. Jonoska, M.; Andonovska, N.; Mitreska, Z. (). Moire bands from a system of equidistant parabolas overlapping with a system of equidistant straight lines and a system of equidistant circles (in Macedonian). Godisen zbornik. Fakultet za fizika. Univerzitetski centar za matematicko-tehnicki nauki na univerzitetot vo Skopje, vol. 34, 1984, 53-58. (RZFZA, 86/6L540).
- 413. Kabanov, M.V.; Kistenev, Yu.V.; Ponomarev, Yu.N. (). Analysis of problems on the propagation of short optical pulses in a linearly absorbing medium. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 212-215.
- 414. Kandidov, V.P.; Shlenov, S.A. (MGU). Laws governing the distribution of a light field propagating in a medium with cubic nonlinearity. IANFA, no. 6, 1986, 1191-1196.
- 415. Kessler, S.; Hild, R. (). Theoretical study on the transverse and longitudinal coherence of rotationally symmetric incoherent light sources with an inhomogeneous intensity distribution. EXPPA, no. 6, 1985, 457-471. (RZFZA, 86/5L19).
- 416. Klim, B.P.; Pochapskiy, Ye.P.; Fedoriv, R.F. (). Statistical analysis of a light signal generated by photoexcitation from a thermal source. OTPIA, no. 74, 1986, 17-21. (PZFZA, 86/6L26).
- 417. Kopa-Ovdiyenko, A.L. (). Using Lagrange coordinates for modeling of light beams with strong spatial deformation. ZVMFA, no. 2, 1986, 311-315. (RZFZA, 86/6L1121).
- 418. Nazyrov, Z.F.; Shul'ga, S.N. (KhGU). Resonance phenomena in the wave diffraction zone. UkrNIINTI. Deposit, no. 546-Uk, 12 Feb 1986, 20 p. (RZFZA, 86/6L10).
- 419. Niibizi, A.; Komotskiy, V.A. (UDN). Theoretical analysis of the interaction between optical waves and a system of spatially distributed periodic gratings. Part 1. System of two gratings. VINITI. Deposit, no. 661-V, 29 Jan 1986, 34 p. (RZFZA, 86/5L13).
- 420. Vinogradov, A.V.; Zorev, N.N. (FIAN). Optical theorem for scattering at an interface. DANKA, v. 286, no. 6, 1986, 1377-1379.

- 421. Vovkotrub, V.P.; Mamontova, Yu.M.; Popov, I.V. (). Classroom demonstration of lightwaves. FIZSA, no. 2, 1986, 49. (RZFZA, 86/6All0).
- 422. Yeflov, V.B.; Il'inskiy, Yu.A. (PetGU). Monte-Carlo method in problems on the propagation of polarized radiation in media with strong anisotropic scattering. VINITI. Deposit, no. 708-V, 31 Jan 1986, 15 p. (RZFZA, 86/5L16).
- 423. Zdravkovik, N. (). Analogy between holographic bands and moire bands from two gratings (in Macedonian). Godisen zbornik. Fakultet za fizika. Univerzitetski centar za matematicko-tehnicki nauki na univerzitetot vo Skopje, vol. 34, 1984, 59-64. (RZFZA, 86/6L542).
  - 2. Propagation in the Atmosphere
- 424. Abramyan, A.S.; Kazaryan, R.A.; Mnatsakanyan, T.A.
  (). Performance improvement of an atmospheric optical homodyne receiver. RAELA, no. 6, 1986, 1174-1177.
- 425. Ageyev, B.G.; Kurov, A.Yu.; Nikolayev, V.D.; Ponomarev, Yu.N.; Svistun, M.I.; Filimonova, V.A. (). Study on the absorptivity of molecular gases and air at the lasing wavelengths of iodine lasers. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 169-173.

ANT SCHOOLS DEVISED SCHOOLS SCHOOL VANCES VANCES VANCES DESCREE GENERAL DEVISED VANCES VA

- 426. Ageyev, B.G.; Kurov, A.Yu.; Nikolayev, V.D.; Ponomarev, Yu.N.; Svistun, M.I.; Filimonova, V.A. (IOA). Study on the absorption of pulsed iodine laser radiation by molecular gases and air. IVUFA, no. 6, 1986, 96-98.
- 427. Aref'yev, V.N. (). Molecular absorption of CO2 laser radiation in an atmospheric window of relative transparency at 8-13 um. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 107-111.
- 428. Aref'yev, V.N.; Baranov, Yu.I.; Visheratin, K.N.; Sizov, N.I. (). Selective absorption of laser radiation by water vapor at the P40 and P20 lines of the 00(sup0)1-10(sup0)0 band of CO2. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 198-201.
- 429. Aref'yev, V.N.; Visheratin, K.N. (). Calculating the coefficients of absorption of CO2 laser radiation by atmospheric ammonia. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 193-197.

- 430. Banakh, V.A.; Buldakov, V.M.; Mironov, V.L. (IOA). Thermal self-action of a partially coherent laser beam in a turbulent atmosphere. KVEKA, no. 6, 1986, 1220-1226.
- 431. Belov, N.N. (). Optical fields in corundum particles in the spectral region of a CO2 laser. ZPSBA, v. 44, no. 6, 1986, 948-953.
- 432. Borisova, N.F.; Bukova, Ye.S.; Vasilevskiy, K.P.; Ladygin, I.N.; Osipov, V.M.; Pavlov, N.I. (). Coefficients of atmospheric absorption and parameters of H2O lines in the nu(sub2) band region. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 98-102.
- 433. Borisova, N.F.; Osipov, V.M.; Pavlov, N.I. ().
  Absorption of CO laser radiation in the atmosphere.
  CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3.
  Tomsk, 1986, 188-192.
- 434. Boyko, S.A.; Popov, A.I.; Sadchikhin, A.V. ().
  Absorption of He-Ne laser radiation at 5.4 um in
  nitric oxide. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985.
  Trudy. Part 3. Tomsk, 1986, 227-230.
- 435. Bufetov, I.A.; Fedorov, V.B.; Fomin, V.K. (). Propagation of an optical flame along a tube. FGVZA, no. 3, 1986, 18-29.
- 436. Bufetov, I.A.; Fedorov, V.B.; Fomin, V.K. (IOF). Measuring the normal rate of optical combustion of an atmosperic optical discharge in a neodymium laser beam. IOF. Preprint, no. 23, 1986, 22 p. (RZFZA, 86/6L1140).
- 437. Gadzhi-Zade, F.M.; Guliyev, I.S.; Feyzullayev, A.A. (NPOKIANAz). Possibility of using satellite measurements of methane in the atmosphere to study the global distribution of its sources. DAZRA, no. 6, 1986, 47-50.
- 438. Godlevskiy, A.P.; Kopytin, Yu.D.; Lazarev, S.V. (IOA). Intracavity laser detection of phase fluctuations of infrared radiation in a turbulent atmosphere. KVEKA, no. 6, 1986, 1302-1305.
- 439. Godlevskiy, A.P.; Kopytin, Yu.D.; Ostanin, S.A.; Sharin, P.P. (). Natural gas analysis of the atmosphere by intracavity coherent detection in a CO2 laser. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 103-106.

- 440. Godlevskiy, A.P.; Kopytin, Yu.D.; Sharin, P.P. (). Study on the possibility of increasing the concentration sensitivity of CO2 lidar detection lasers for gas analysis of the atmosphere. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 178-180.
- 441. Godlevskiy, A.P.; Sharin, P.P. (). Highly sensitive gas analysis of the atmosphere in the 10.6 um region by intracavity laser spectroscopy with a long resonator. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 181-182.
- 442. Khaytun, F.I.; Pleshanov, Yu.V. (GOI). Problems in the theory of signal optimization in pulsed optical ranging systems. GOI. Trudy, no. 192, 1985, 206-216. (RZFZA, 86/5L1325).
- 443. Konkurin, Yu.L.; Kurbasov, V.V.; Lobanov, V.F.; Lypkan', N.M.; Ovsyankin, M.A. (FIAN). Precise time and frequency system for laser ranging of the moon. FIAN. Preprint, no. 294, 1985, 11 p. (RZRAB, 86/5Ye547).
- 444. Korshunov, V.A. (). Determination of the extinction coefficient profile in an aerosol medium by two-wave sounding. ZPSBA, v. 44, no. 6, 1986, 991-996.

SESSESSE PROPERTY DESCRIPTION OF THE PROPERTY DESCRIPTION OF THE PROPERTY PROPERTY OF THE PROP

- 445. Koziratskiy, Yu.L.; Potekhetskiy, S.V.; Smirnov, A.V. (). Determining the number of pulses in a laser ranging system. RATEA, no. 2, 1986, 80-82. (RZRAB, 86/6Ye566).
- 446. Kuznetsov, V.N.; Nosov, A.V. (IOAN). Laser wave-recorder. OKNOA, no. 3, 1986, 528-531.
- 447. Makushkin, Yu.S.; Mitsel', A.A.; Firsov, K.M. (IOA). Effect of the variation in temperature and humidity on 10.6 um radiation absorption. IFAOA, no. 6, 1986, 595-599.
- 448. Makushkin, Yu.S.; Mitsel', A.A.; Ponomarev, Yu.N.; Rudenko, V.P.; Firsov, K.M. (). Physical fundamentals of an automated system for studying the interaction of intense optical radiation and the atmosphere. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 112-116.
- 449. Makushkin, Yu.S.; Petrova, A.I.; Stroynova, V.N. (). Effect of spectral line broadening in atmospheric gases on the absorption of narrowband optical radiation. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 202-206.

- 450. Milyutin, Ye.R.; Frezinskiy, B.Ya.; Samel'son, G.M.
  (). Frequency and spatial correlation of parameters of optical waves in a turbulent atmosphere. Obrabotka informatsii v sistemakh svyazi. Leningrad, 1985, 62-68. (RZFZA, 86/5Zh223).
- 451. Naats, I.E. (). Theory of multifrequency laser ranging of aerosols in small illuminated volumes. Tomsk filial Sibirskogo otdeleniya Akademii nauk SSSR. Preprint, no. 38, 1985, 53 p. (RZFZA, 86/6L1208).
- 452. Nadeyev, A.I.; Shelevoy, K.D. (IOA). Estimating the intensity of lidar signals in photon counting in terms of reduced data. VINITI. Deposit, no. 897-V, 7 Feb 1986, 18 p. (RZFZA, 86/5L1326).
- 453. Pleshanov, Yu.V.; Vereshchaka, A.I. (GOI). Laser systems to determine the coordinates of aircraft near runways during takeoff and landing. GOI. Trudy, no. 192, 251-257. (RZRAB, 86/5Ye556).
- 454. Ponomarev, Yu.N.; Ponomareva, S.B.; Terletskaya, S.V.; Firsov, K.M. (). Optical models of nonlinear absorption in the atmosphere for radiation at 10.6 um. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 207-211.
- 455. Prokopov, A.V. (). Integral representation of ray equations in geometric optics. PZTFD, no. 24, 1985, 1526-1529.
- 456. Pustovalov, V.K. (BPI). Diffuse convective vaporization of droplets by intense optical radiation, allowing for the temperature dependences of the transfer coefficients. INFZA, vol. 50, no. 5, 1986, 718-724.
- 457. Sheyfot, A.I.; Gaydukov, M.N. (MOPI). Lateral movement of an aerosol particle in a laser radiation field. ZTEFA, no. 5, 1986, 951-954.
- 458. Ustinov, N.D.; Moiseyev, V.N.; Tikhomirov, V.A.; Troitskiy, I.N.; Shugayev, M.M. (). Time of appearance of optical breakdown in air at a solid surface. KVEKA, no. 5, 1986, 918-923.
- 459. Vetrov, A.A.; Kulyasov, A.G.; Marasin, L.Ye.; Sokolov, S.A. (GOI). Airborne laser profile recorders: new practical means for forest evaluation, ice patrols and geodetic surveys. GOI. Trudy, no. 192, 230-250. (RZRAB, 86/5Ye555).

- 460. Volyak, K.I.; Mikhalevich, V.G.; Shevchenko, T.B.; Shugan, I.V. (IOF). Laser measurement of the statistical properties of the sea surface. IANFA, no. 6, 1986, 1111-1116.
- 461. Voytsekhovskaya, O.K.; Zuyev, V.V.; Ippolitov, I.I.; Trifonova, N.N. (). Using double resonance absorption to determine the composition of the atmosphere. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 223-226.
- 462. Zhulanov, Yu.V.; Zagaynov, V.A.; Lushnikov, A.A.; Lyubovtseva, Yu.S.; Nevskiy, I.A.; Stulov, L.D. (NIFKhI). Highly dispersed and submicron arid-zone atmospheric aerosols. IFAOA, no. 5, 1986, 488-496.

# 3. Propagation in Liquids

- 463. Adzhemyan, L.V.; Adzhemyan, L.Ts.; Zubkov, L.A.; Orekhova, N.V.; Romanov, V.P. (). Study on the kinetics of the order parameter in the isotropic phase of liquid crystals by means of a three-way Fabry-Perot standard. OPSPA, v. 59, no. 6, 1985, 1169-1172.
- 464. Bayev, S.G.; Vedernikov, V.M.; Kir'yanov, V.P.; Kogalapkin, G.Yu.; Fortus, V.M. (TOI). Improving the accuracy of measurements of the fine structure of the density field of seawater. TOI. Preprint, no. not given, 1985, 18 p. (RZGFA, 86/5V45).
- 465. Damm, T.; Kaschke, M.; Kresser, M.; Noack, F.; Rentsch, S.; Triebel, W. (). Ultrashort pulse spectrometer based on a neodymium phosphate glass laser and its use to study photophysical processes. EXPPA, no. 5, 1985, 409-416. (RZFZA, 86/5L1298).
- 466. Gorkavenko, V.V. (). Brightness coefficient at the interface of two media [in measuring the profile of the ocean floor]. Perekhodnyye yavleniya v okeane, atmosfere i litosfere. Vladivostok, 1985, 13-17. (RZGFA, 86/6V240).
- 467. Romashko, Ye.A.; Rudin, G.I.; Shabunya, S.I. (ITMO). Dynamics of laser breakdown of transparent liquids. ITMO. Preprint, no. 25, 1985, 31 p. (RZFZA, 86/5L1268).
- 468. Romashko, Ye.A.; Rudin, G.I.; Shabunya, S.I. ().
  Dynamics of the breakdown of transparent liquids under
  the action of nanosecond laser pulses. Teplo i
  massoperenos: itogi i perspektivy. Minsk, 1985,
  102-104. (RZRAB, 86/5Ye653).

- 469. Simonenko, Z.G.; Poray-Koshits, A.B.; Ovchinnikov-Sazonov, A.M.; Molochnikov, B.I. (GOI). Methods for measuring gradients of concentration in liquid media. OPMPA, no. 8, 1985, 48-54.
- 470. Zubkov, L.A.; Orekhova, N.V. (). Study on the near part of the Rayleigh line wing in water. OPSPA, v. 60, no. 1, 1986, 208-210.

# 4. Adaptive Optics

- 471. Basov, N.G.; Kovalev, V.I.; Musayev, M.A.; Fayzullov, F.S. (FIAN). Wavefront reversal of pulsed CO2 laser radiation. Obrashcheniye volnovogo fronta lazernogo izlucheniya. FIAN. Trudy, no. 172, Moskva, Nauka, 1986, 116-179.
- 472. Basov, N.G.; Vasin, A.P.; Yefimkov, V.F.; Zubarev, I.G.; Smirnov, M.G.; Sobolev, V.B. (FIAN). Hypersonic wavefront reversal mirror operating according to an oscillator-amplifier scheme. KVEKA, no. 6, 1986, 1201-1206.
- 473. Basov, N.G.; Yefimkov, V.F.; Zubarev, I.G.; Mikhaylov, S.I. (FIAN). Forming the space-time structure of light waves from stimulated scattering in hypersound. Obrashcheniye volnovogo fronta lazernogo izlucheniya. FIAN. Trudy, no. 172, Moskva, Nauka, 1986, 10-115.
- 474. Bolotskikh, L.T.; Butenko, A.V.; Popkov, V.G.; Popov, A.K.; Shalayev, V.M. (IFSOAN). CO2 laser radiation wavefront reversal in a three-beam interaction scheme. KVEKA, no. 5, 1986, 1058-1061.

SEN BESCHI TOTTE TOTTE TOTTE SOUTH SOUTH TOTTE TOTTE TOTTE TOTTE DESCRIPTION DESCRIPTION

- 475. Gavryushenko, B.S.; Kurenkov, A.V.; Mozgovoy, V.N.; Novikov, V.V.; Semenova, G.I.; Shanin, O.I. (GOI). Adaptive interferometer. OPMPA, no. 8, 1985, 27-28.
- 476. Goryachkin, D.A.; Kalinin, V.P.; Kozlovskaya, I.M.; Komin, I.A.; Pomanov, N.A. (). CO2 amplifier with a mirror utilizing degenerate four-wave interaction. KVEKA, no. 5, 1986, 900-905.
- 477. Kabanov, V.V.; Rubanov, A.S.; Tolstik, A.L.; Chaley, A.V. (IFANB). Dynamic holograms and four-wave phase conjugation in crystals. JFANB. Preprint, no. 411, 1986, 34 p. (RZFZA, 86/6L1093).
- 478. Kavun, A.A.; Osetrov, V.P.; Popov, A.I.; Sklizkov, G.V.; Fedotov, S.I. (FIAN). Amplifying element for an active mirror. FIAN. Preprint, no. 333, 1986, 10 p. (RZFZA, 86/6L666).

- 479. Krivoshchekov, V.A.; Mamayev, A.V.; Pilipetskiy, N.F.; Shkunov, V.V. (IPMe). Quality of wavefront reversal under stimulated Brillouin scattering in fiber lightguides. VINITI. Deposit, no. 1049-V, 13 Feb 1986, 27 p. (RZFZA, 86/5L1236).
- 480. Krivoshchekov, V.A.; Pilipetskiy, N.F.; Shkunov, V.V. (IPMe). Dependence of the quality of wavefront reversal under stimulated scattering in a fiber-optic waveguide upon conditions of radiation coupling. KVEKA, no. 6, 1986, 1264-1266.
- 481. Orlov, V.V. (). Resolution during the reversal of a wave field through a thin inhomogeneous medium. OPSPA, vol. 60, no. 6, 1986, 1221-1225.
- 482. Safronov, A.N.; Troitskiy, I.N. (). Phase measuring method in coherent optics. AVMEB, no. 6, 1985, 98-103.
- 483. Sherstobitov, V.Ye. (). Device for wavefront reversal. OTIZD, no. 40, 1985, 1188695. (RZRAB, 86/6Ye500).
- 484. Sukhorukov, A.P.; Trofimov, V.A. (). Mathematical modeling of multiparametric problems in nonlinear adaptive optics. Metody matematicheskogo modelirovaniya, avtomatizatsii obrabotki nablyudeniy i ikh primeneniya. MGU. Moskva, 1986, 105-120. (RZFZA, 86/6L667).
- 485. Trofimov, V.A. (). Adaptive automatic focusing in delay systems. OPSPA, v. 59, no. 5, 1985, 1153-1155.
- 486. Umarov, G.Ya.; Mirzayev, A.T.; Yakubov, A.N. (). Interferometric method for reconstructing images of objects by coincidences. DANUA, no. 12, 1985, 24-25. (RZFZA, 86/5L675).
- 487. Ustinov, N.D.; Anufriyev, A.V.; Vol'pov, A.L.; Zimin, Yu.A.; Tolmachev, A.I. (). Maximization of sharpness functions upon observation of objects in coherent light through a randomly inhomogeneous medium. KVEKA, no. 5, 1986, 937-941.

- 488. Yerokhin, A.I.; Kovalev, V.I.; Fayzullov, F.S. (FIAN). Using nondegenerate four-wave interaction to measure the parameters of nonlinear response in liquids in an acoustic resonance field. FIAN. Preprint, no. 7, 1986, 23 p. (RZFZA, 86/6L1192).
- 489. Zel'dovich, B.Ya.; Orlova, M.A.; Shkunov, V.V. (IPMe). Four-wave parametric oscillation in a scheme with transverse pumping. KVEKA, no. 5, 1986, 967-972.

- 490. Zuyev, V.Ye. (). Atmospheric adaptive optics. IVUFA, no. 11, 1985, 3-5. (RZFZA, 86/6L664).
- D. COMPUTER TECHNOLOGY
  - 491. Berezhnoy, A.A.; Sherstneva, T.N. (GOI). Electrooptic devices in optical information processing systems. GOI. Trudy, no. 192, 1985, 267-282. (RZRAB, 86/5Ye704).
- 492. Dumarevskiy, Yu.D.; Kovtonyuk, N.F.; Petrovicheva, G.A.; Savin, A.I. (GOI). Refocusing of images in an optical system with optically controlled transparencies using metal-dielectric-semiconductor--liquid crystal structures. OPMPA, no. 11, 1985, 8-11.
- 493. Kotov, B.A. (). Matrix optical information converters in the visible region. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 131-147.
- 494. Vodovatov, I.A.; Vysotskiy, M.G.; Petrun'kin, V.Yu.; Rogov, S.A.; Samsonov, V.G. (). System for recording and processing optical signals based on charge-coupled devices and the Elektronika 60M microcomputer. AVMEB, no. 6, 1985, 76-80.
- E. HOLOGRAPHY
- 495. Andreyev, S.Ye.; Andreyev, R.B.; Nikashin, V.A.; Ovechkina, T.G. (NIKFI). Problems of pulsed photography of color holographic motion picture images by means of solid state YAG lasers with frequency doubling and stimulated Raman conversion. NIKFI. Trudy, no. 122, 1985, 64-69. (RZFZA, 86/6L745).
- 496. Andreyeva, O.V.; Sukhanov, V.I. (). Using the parameters of a developed photographic layer to calculate the diffraction efficiency of unbleached three-dimensional holograms. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 43-51.
- 497. Asimov, M.M.; Nikashin, V.A. (NIKFI). Flashlamp-pumped pulsed dye lasers for photography and printing of color holographic motion picture images. NIKFI. Trudy, no. 122, 1985, 70-73. (RZFZA, 86/6L744).
- 498. Barikhin, B.A.; Dudarevich, A.L.; Nedolugov, V.I. (). Investigation of plasma-dynamic processes by high-speed holography. ZPSBA, v. 44, no. 6, 1986, 1006-1009.

ቑቔኯ፞፞፞ዸቑዾ፟ኯዀኯዀኯዄኯፚኯፚኯፚኯዄቑፙፙዀዄኇፙኯዄኯፚኇፙኇፙጜዄጜዄኇፙኇዺጚዺጚዺጚዄፙዺዺጚዺጚዹዺዺዺኇዺዺ

- 499. Bondarenko, V.G. (). Position of a volume hologram image reconstructed by small aperture beams. ZPSBA, v. 44, no. 5, 1986, 863-867.
- 500. Brodzeli, M.I.; Gilel's, A.M.; Dekanozishvili, G.G.; Yeligulashvili, I.A.; Chernov, G.M. (). Diphenylbenzylamine and carbon tetrabromide layers as media for the holographic recording of information. ZNPFA, no. 3, 1986, 212-214.
- 501. Bugayev, A.A.; Zakharchenya, B.P. (). Holographic temporal diagnostics with picosecond resolution. OPSPA, vol. 60, no. 5, 1986, 1043-1047.
- 502. Denisyuk, Yu.N. (). Displaying of wave fields by static Doppler three-dimensional holograms.

  Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 4-9.
- 503. Denisyuk, Yu.N.; Davydova, I.N. (). Recording of light models of orthogonal functions in three-dimensional holograms. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 9-17.
- 504. Ebralidze, T.D. (). Anisotropic holographic diffraction grating. OPSPA, vol. 60, no. 6, 1986, 1269-1272.
- 505. Furduyev, A.V.; Takhtarov, B.V.; Shpuntov, A.I.; Umanskiy, Yu.K.; Lapides, A.A. (NIKFI). Method for copying soundtracks [for holographic motion pictures]. OTIZD, no. 42, 1985, 1191938. (RZRAB, 86/5Ye718).
- 506. Gal'pern, A.D.; Kalinina, I.V.; Selyavko, L.V.; Smayev, V.P. (). Production of relief-phase holograms on PE-2 photoplates and their reproduction. OPSPA, vol. 60, no. 5, 1986, 1040-1042.
- 507. Garibashvili, K.A.; Mumladze, V.V.; Svanidze, M.M.; Timofeyeva, E.Ye. (). Effect of 10.6 um laser radiation on color centers in KCl, KBr, and NaCl single crystals. OPSPA, vol. 60, no. 6, 1986, 1211-1214.
- 508. Jagoszewski, E. (). Third-order aberration coefficients of a Fraunhofer hologram formed at the spherical surface of the recording medium (in English). OPAPB, no. 1, 1985, 111-117. (RZFZA, 86/5L885).

- 509. Janikijevik, Lj. (). Elliptical hologram as a wave condensor (in Macedonian). Godisen zbornik. Fakultet za fizika. Univerzitetski centar za matematicko-tehnicki nauki na univerzitetot vo Skopje, vol. 34, 1984, 35-51. (RZFZA, 86/5L887).
- 510. Kakichashvili, Sh.D.; Tarasashvili, V.I. (). Photoinduced anisotropy of selenium-cadmium KS-19 glass. OPSPA, vol. 60, no. 5, 1986, 1071-1073.
- 511. Kartasheva, O.A.; Kononenko, I.I.; Gruz, E.A. (). Study on the possibility of reducing noise level in holographic photographic materials. Svetochuvstvitel'nyye materialy dlya fotograficheskoy registratsii opticheskikh informatsii. VGNIPIKFP. Moskva, 1985, 29-33. (RZFZA, 86/5L895).
- 512. Korolev, A.Ye.; Nazarov, V.N.; Stasel'ko, D.I. (). Holographic recognition of high-speed images based on resonance atomic media. PZTFD, no. 12, 1986, 732-737.
- 513. Korzinin, Yu.L.; Sukhanov, V.I. (). Space and frequency variant of the theory of three-dimensional holograms. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 52-74.
- 514. Kostyshin, M.T.; Romanenko, P.F.; Stronskiy, A.V.; Kolomiyets, T.M.; Sopinskiy, N.V. (). Effect of the thickness of the metal layer on the process of recording in holographic diffraction gratings consisting of a photosensitive As(sub2)Se(sub3)-As(sub2)S(sub3)-Ag system. UFIZA, no. 1, 1986, 55-59. (RZFZA, 86/6L736).
- 515. Kryukov, V.V.; Dukhopel, I.I. (GOI). Relation of the parameters of a manufacturing process and the deformation characteristics of a photothermoplastic film. OPMPA, no. 5, 1986, 46-47.
- 516. Kuleshov, A.M.; Shubnikov, Ye.I.; Smayeva, S.A. (). Matched holographic filter. OPSPA, vol. 60, no. 6, 1986, 1273-1276.
- 517. Mazurenko, Yu.T. (). Recording, reconstruction and conversion of light pulses by volume spectral holograms. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 91-104.
- 518. Miler, M. (). Optical holography of today (in Czech). Matematika a fyzika ve skole, no. 4, 1985-1986, 242-249. (RZFZA, 86/5A80).

- 519. Nowak, J.; Zajac, M. (). Numerical investigations of holographic imaging quality (in English). OPAPB, no. 3, 1985, 239-248. (RZRAB, 86/6Ye723).
- 520. Ovechkina, T.G. (NIKFI). Characteristic diffraction curves of high-resolution photomaterials for holography. NIKFI. Trudy, no. 122, 1985, 134-144. (RZFZA, 86/6L733).
- 521. Popov, A.P.; Kavtrev, A.F.; Veniaminov, A.V.; Lashkov, G.I. (). Longwave limit of spectral sensitivity of reoxane polymers. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 82-91.
- 522. Rostovtseva, N.V. (NIKFI). Multilayer holographic optical element consisting of thin phase holograms. NIKFI. Trudy, no. 122, 1985, 108-117. (RZFZA, 86/6L746).
- 523. Saari, P.M.; Rebane, A.K.; Kaarli, R.K. ().
  Recording of space-time holograms in spectral highly
  selective media. Opticheskaya golografiya s zapis'yu
  v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka,
  1986, 30-43.
- 524. Serov, O.B.; Mashkovtsev, A.N.; Dudareva, L.G. (NIKFI). Pulsed lasers for hologrphic motion picture photography. NIKFI. Trudy, no. 122, 1985, 55-63. (RZFZA, 86/6L743).

HEN HUKKER FESSESS FESSESS FESSESSEL FESSESSEL FESSESSEL FESSESSEL FESSESSEL FESSESSEL

- 525. Shelekhov, N.S.; Bandyuk, O.V.; Popov, A.P.; Rebezov, A.O. (). Using phenanthrenequinone for photobleaching of three-dimensional phase holograms in a reoxane medium. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 74-82.
- 526. Skochilov, A.F. (). Diffraction of plane TM waves by a three-dimensional phase grating. OPSPA, v. 60, no. 1, 1986, 132-136.
- 527. Skochilov, A.F.; Sattarov, F.A. (). Secondary gratings in three-dimensional phase holograms. OPSPA, vol. 60, no. 6, 1986, 1264-1268.
- 528. Smayev, V.P.; Bryskin, V.Z.; Znamenskaya, Ye.M.; Kursakova, A.M.; Shakhova, I.B. (GOI). Two-layer photomaterial hologram recording characteristics. OPMPA, no. 5, 1986, 38-41.

CONTRACTOR OF THE STATE PARTICION OF THE STATE OF THE STA

- 529. Smolovich, A.M (NTEFI). Possibility of multiple use of a zero beam in hologram reconstruction. NIKFI. Trudy, no. 122, 1985, 118-120. (RZFZA, 86/6L756).
- 530. Stepanov, S.I. (). Transient mechanisms of holographic recording in photorefractive crystals. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 17-30.
- 531. Veniaminov, A.V.; Lashkov, G.I. (). Hologram recording in passing beams on recxan of various modifications. OPSPA, vol. 60, no. 6, 1986, 1259-1263.
- 532. Voronin, Ye.N. (). Optimal solutions on the average, of problems in selective holography. IVUZB, no. 2, 1986, 16-29. (RZRAB, 86/6Ye737).
- 533. Yashin, N.M. (IBFiz). Identification of interference bands during their breakup at the walls of a cuvette. PRTEA, no. 3, 1986, 175-177.
- 534. Zelenskiy, A.A.; Lukin, V.V. (). Digital reconstruction of images by phase holograms with displacement. IVUZB, no. 2, 1986, 100-102. (RZFZA, 86/6Zh276).
- F. LASER-INDUCED CHEMICAL REACTIONS
  - 535. Adamova, Yu.A.; Skachkov, A.N.; Sosnina, G.F. (). N(sub2)F(sub4) and NF(sub3) reactions, stimulated by resonance radiation of a CO2 laser. KHFID, no. 5, 1986, 620-627.
- 536. Apatin, V.M.; Bagratashvili, V.N.; Ionov, S.I.; Letokhov, V.S.; Lokhman, V.N.; Makarov, G.N. (ISAN). Direct photoionization measurements of slow decay rates of vibrationally overexcited [CF(sub3)](sub3)Cl molecules in the ground electron state in a molecular beam. ISAN. Preprint, no. 1, 1985, 36 p. (RZFZA, 86/6D227).
- 537. Bonch-Bruyevich, A.M.; Libenson, M.N.; Makin, V.S.

  (). Role of high-power electromagnetic wave generation in the action of intense light on condensed media. OPSPA, v. 59, no. 6, 1985, 1350-1354.

538. Borisevich, N.A.; Dorokhin, A.V.; Sukhodola, A.A. (). Efficiency of forming singlet excited molecules in a triplet-triplet anihilation process. OPSPA, v. 59, no. 2, 1985, 1327-1330.

- 539. Bunkin, N.F.; Luk'yanchuk, B.S.; Shafeyev, G.A. (IOF). Thermoelectrochemical instability in laser heating of absorptive electrolyte solutions. IANFA, no. 6, 1986, 1176-1181.
- 540. Bychkov, S.G.; Desyatkov, A.V.; Biketov, A.A.; Ksandopulo, G.I. (). Kinetic laws governing laser pyrolysis of epoxy resin. FGVZA, no. 3, 1986, 88-91.
- 541. Bykovskiy, Yu.A.; Lisyutenko, V.N.; Potapov, M.M.; Chistyakov, A.A. (MIFI). Interaction between resonance ultraviolet laser radiation and nitroaromatic crystals. KVEKA, no. 5, 1986, 1022-1024.
- 542. Kozlova, Ye.K.; Portnyagin, A.I.; Filippov, A.Ye. (MGU). Thermogradient model of laser action on self-catalytic reactions. IANFA, no. 6, 1986, 1235-1237.
- 543. Kreysig, D. (). Laser photochemistry. WIFOA, no. 1, 1985, 282-284. (RZRAB, 86/6Ye707).
- 544. Kuz'min, M.V.; Letokhov, V.S.; Stuchebryukhov, A.A. (NITSTLAN). Threshold energy dependence of the rate of intramolecular vibrational relaxation in an isolated polyatomic molecule. ZETFA, v. 90, no. 2, 1986, 458-470.
- 545. Letokhov, V.S. (). Laser-induced processes in spectroscopy, isotope separation and photochemistry. UFNAA, v. 148, no. 1, 1986, 123-141. (RZFZA, 86/5L174).
- 546. Malyshev, G.F.; Telegin, G.G. (SKTBSEAP). Resonance ionization of laser-excited atoms. ZTEFA, no. 6, 1986, 1195-1198.
- 547. Perov, A.A.; Stepanov, A.N.; Kabanov, S.P.; Simonov, A.P. (NIFKhI). Ionization of inert gas atoms in Rydberg states in collisions with thermal energy molecules. KHFID, no. 5, 1986, 609-614.
- 548. Pimenov, V.P.; Skachkov, A.N. (). Dynamics of laser heating and changes of the optical density of an absorbing gas. KHFID, no. 6, 1986, 856-858.
- 549. Ristoiu, T.; Candea, R.M.; Mercea, V. ().
  Optoacoustic and optothermal methods to study
  multiphoton absorption of IR laser radiation [for
  isotope separation]. SCEFA, no. 9, 1985, 790-814.
  (RZFZA, 86/6L1174).

- 550. Tugov, I.I. (IOF). Nonlinear photoprocesses in diatomic molecules. Experiment and theory. IANFA, no. 6, 1986, 1148-1154.
- 551. Zagrebin, S.B.; Samson, A.V. (). Study on ionization collisions under selective optical excitation of a barium atom beam. LZFTA, no 6, 1985, 118-119. (RZFZA, 86/5D272).
- G. MEASUREMENT OF LASER PARAMETERS
  - 552. Bagayev, S.N.; Chebotayev, V.P. (). Laser frequency standards. UFNAA, v. 148, no. 1, 1986, 143-178. (RZFZA, 86/5L1061).
  - 553. Goncharov, V.K.; Kvachenok, V.G.; Kolesnik, A.V.; Kolesnikov, V.N.; Kontsevoy, V.L.; Revinskiy, V.V.; Tovmasyan, S.K.; Chernyavskiy, A.F. (FIAN). Optical multichannel analyzer to study two-dimensional intensity distributions. FIAN. Preprint, no. 12, 1986, 25 p. (RZFZA, 86/6L608).
  - 554. Gongadze, A.Sh.; Mirzayev, A.T. (TashGU). Correlator and photon counter based on a minicomputer. PRTEA, no. 3, 1986, 98-101.
  - 555. Gutsaki, V.N.; Dindarov, V.E.; Zholnerov, V.S.; Petrun'kin, V.Yu.; Semenov, V.V. (). Multiphoton resonance in ruby vapor under hyperfine optical pumping. OPSPA, v. 60, no. 1, 1986, 201-203.
  - 556. Il'in, V.Ye.; Kuprevich, V.V.; Petrova, L.I.; Semenov, Ye.P. (GOI). Visualization of IR laser radiation. GOI. Trudy, no. 192, 1985, 83-96. (RZFZA, 86/5Ll134).
  - 557. Kufert, S.; Hackerott, J. (). Method for fabricating absorption elements [to measure laser power]. Patent GDR, no. 226598, 28 Aug 1985. (RZRAB, 86/5Ye498).
  - 558. Levi, A.M.; Chereugin, V.L. (). Time marker for a digital printing device. IZTEA, no. 6, 1986, 37-39.
- 559. Shurgaya, R.R. (). Theoretical investigation of the sensitivity of a wide-aperture means of measurement of high power laser radiation. IZTEA, no. 6, 1986, 30-33.

#### H. LASER MEASUREMENT APPLICATIONS

## Direct Measurement by Laser

- 560. Adrianova, I.I.; Zaslavskaya, V.R.; Korunnyy, V.N.; Chizhikov, G.G. (GOI). Coherent laser systems for measuring motion parameters. GOI. Trudy, no. 192, 1985, 258-267. (RZFZA, 86/5L1314).
- 561. Akopyan, I.G.; Semeykin, N.P.; Fil', V.A.; Sharshin, Yu.A. (). Device for discrete measurement of the signal frequency of a laser Doppler velocimeter. OTIZD, no. 19, 1986, 1233058.
- 562. Aleksandrov, K.S.; Andrianov, G.O.; D'yakonov, A.M.; Zamkov, A.V.; Lemanov, V.V. (FTI). Photoelastic characteristics of PbCl(sub2) crystals at 10.6 um. PZTFD, no. 12, 1986, 737-740.
- 563. Aleksandrov, M.L.; Asinovskiy.L.M.; Melytsin,, A.L.; Tolokonnikov, V.A. (). Methods and apparatus of complete ellipsometry. ZPSBA, v. 44, no. 6, 1986, 887-908.
- 564. Andrushchak, Ye.A.; Bukshtam, B.M.; Vasil'yev, V.P.; Vilkov, S.A.; Karaul'nik, A.Ye.; Poddubnyak, V.Ya.; Tychinskiy, V.P. (). Optoelectronic device for measuring the amplitudes of the acoustic vibrations of a surface. OTIZD, no. 18, 1986, 1231411.
- 565. Apostol, D.; Berbulescu, D.; Komissarova, I.I.;
  Ostrovskaya, G.V.; Ostrovskiy, Yu.I.; Shedova, Ye.N.
  (FTI). Method for studying phase objects. OTIZD, no.
  17, 1986, 1229567.
- 566. Azizov, M.A.; Bakhtin, V.G.; Polukhina, S.P. (). Using optical holography to study stress deformation states in metal dental bridge prostheses. Stomatologiya, no. 6, 1985, 66-68. (LZSTA, 26/86, 95725).
- 567. Barvinskiy, L.L.; Lizhdvoy, K.Ya.; Svirid, V.A.; Khotyaintsev, S.N. (). Evaluating the performance of fiberoptic sensors. IVUZB, no. 1, 1986, 78-79. (RZRAB, 86/6Ye432).
- 568. Belea, A. (). Using lasers in plasma diagnostics. SCEFA, no. 10, 1985, 895-924. (RZFZA, 86/5G394).
- 569. Belinskiy, A.V.; Chirkin, A.S. (MGU). Fabry-Perot interfermometer with random phase inhomogeneities. KVEKA, no. 5, 1986, 906-913.

- 570. Belousova, I.M.; Gorshkov, A.S.; Ivanov, I.P.; Ivanovskaya, M.I. (GOI). Large-baseline laser interferometers for geophysical research. GOI. Trudy, no. 192, 1985, 163-173. (RZFZA, 86/5L1319).
- 571. Bendere, R.B.; Kalnynya, R.P.; Feltyn', I.A.; Freyvalde, I.R. (). Ellipsometric study on the surface of CdTe single crystals. LZFTA, no. 2, 1986, 81-84. (RZFZA, 86/6L389).
- 572. Berdnikov, V.S.; Ganzherli, N.M.; Gurevich, S.B.; Maurer, I.A. (FTI). Real-time holographic interferometry study on free convection in hidden cavities. FTI. Preprint, no. 996, 1986, 18 p. (RZFZA, 86/6L728).
- 573. Bilenko, D.I.; Belobrovaya, O.Ya.; Ignat'yev, A.S.; Mokerov, V.G.; Pylayev, S.Ye.; Ryabinin, I.V. (NIIMF). Determination of the thickness and composition of epitaxial layers during the formation of a GaAs-Ga(subl-x)Al(subx)As structure. ZTEFA, no. 6, 1986, 1198-1201.
- 574. Blistanov, A.A.; Geras'kin, V.V.; Stepanova, A.V.; Mirtova, Ye.G. (MISIS). The effect of an external electric field on the pyroelectric field in LiNbO(sub3). FTVTA, no. 5, 1986, 1344-1347.
- 575. Bondarenko, A.N.; Kondrat'yev, A.I.; Trotsenko, V.P.

  (). Method for ultrasonic [and laser] quality control of products. OTIZD, no. 19, 1986, 1233046.
- 576. Bornmann, V.; Winkler, T.; Ulke, S. (). Light signal projector for measuring variable diameters of light spots. Patent GDR, no. 226669, 28 Aug 1985. (RZRAB, 86/5Ye616).

- 577. Burmasov, V.S.; Kruglyakov, E.P.; Semenov, Ye.P.; Khil'chenko, A.D. (IYaFSOAN). Nine-channel laser interferometer with a general tunable initial phase. IYaFSOAN. Preprint, no. 139, 1985, 14 p. (RZFZA, 86/6G399).
- 578. Churayev, A.L.; Stasel'ko, D.I.; Kuznetsov, S.I.; Alekseyev, V.P. (GOI). Apparatus for the measurement of dynamic deformations of diffusely scattered objects by holographic, moire and speckle interferometric methods. OPMPA, no. 5, 1986, 22-24.
- 579. Dmitriyev, A.V.; Zinov'yev, V.V.; Zak, Ye.A. (). Optical sensors in industrial robot sensitization systems. ZRBEA, no. 12, 1985, 60-68.

- 580. Domnin, Yu.S.; Kopylov, L.N.; Koshelyayevskiy, N.B.; Ovchinnikov, S.N.; Tatarenkov, V.M. (). Portable lasers as a component of a single standard of time, frequency, and length. IZTEA, no. 6, 1986, 7-8.
- 581. Domnin, Yu.S.; Malimon, A.N.; Tatarenkov, V.M.; Shumyatskiy, P.S. (). Radiooptic frequency bridge of a single standard of time, frequency, and length. IZTEA, no. 6, 1986, 5-7.
- 582. Dubovikova, Ye.A.; Dubovikov, M.S. ().
  Regularization, experimental errors and estimation of accuracy in tomography and interferometry. OPSPA, v. 60, no. 1, 1986, 172-178.
- 583. Gerasimenko, B.P.; Zemlyanoy, A.P.; Knigavko, N.V. (KhIIZhT). Technical control algorithm for a laser gyroscope direction finder. VINITI. Deposit, no. 97-V, 3 Jan 1986, 7 p. (RZRAB, 86/5Ye703).
- 584. Gol'dberg, M.M.; Vikaruk, A.Ya.; Sokolov, S.V.; Suminov, I.V. (MATI). Study on the performance of an end-type plasma accelerator triggered by an electrical explosion of a foil. IVUFA, no. 6, 1986, 8-12.
- 585. Gorlov, S.N.; Gorshkov, V.A.; Fomin, O.N. (). Method for monitoring the surface shapes of optical components. OTIZD, no. 18, 1986, 1231408.
- 586. Grigor'yeva, T.M.; Levitskiy, A.A.; Polak, L.S.; Potapkin, B.V.; Rusanov, V.D.; Fridman, A.A. (INKhS). Mathematical modeling of the dissociation of CO2 in a supersonic flow of non-equilibrium plasma. KHVKA, no. 3, 1986, 279-283.
- 587. Gusev, V.G.; Lazarev, S.V. (GOI). Speckle interferometric indication of the decentering of a lens. OPMPA, no. 6, 1986, 3-5.
- 588. Ivanov, S.V.; Chrenyy, V.V. (VZMI). Fiberoptic refractometer. TsNIITEIpriboro. Deposit, n. 3137-pr, 30 Dec 1985, 47 p. (RZFZA, 86/5L872).
- 589. Karlov, N.V.; Kononov, N.N.; Kuz'min, G.P.; Orlov, N.G.; Toker, G.R. (IOF). Holographic interferometry of shock waves initiated by a gigawatt CO2 laser pulse on a transparent target. KVEKA, no. 6, 1986, 1294-1297.
- 590. Keldysh, L.V.; Tikhodeyev, S.G. (LGU). Interference of light waves with sub-Poisson statistics and the sensitivity of laser gravitational observations. ZETFA, vol. 90, no. 6, 1986, 1889-1899.

- 591. Kerstan, F.; Brudckner, V. (). Device for generation of laser-controlled ultrashort electric pulses. Patent GDR, no. 225581, 31 Jul 1985. (RZRAB, 86/5Ye615).
- 592. Ketkovich, A.A.; Mirovitskaya, S.D. (). Measurement of the geometric parameters of small objects. MTRLB, no. 6. 1986, 18-28.
- 593. Korotkov, A.N. (). Laser anemometer with signal discrimination by delayed coincidence. TVYTA, no. 6, 1985, 1216-1218. (RZFZA, 86/6A208).
- 594. Kozubskiy, E.V.; Skryl', I.I. (OIYaI). Vertex detector. OTIZD, no. 46, 1985, no. 1098408A. (RZFZA, 86/6V696).
- 595. Kromin, S.I.; Lyubimov, V.V.; Shekhtman, V.N. ().
  Measurement of a scattered light-wave component.
  KVEKA, no. 5, 1986, 962-966.
- 596. Lashkov, G.I.; Veniaminov, A.V.; Ratner, O.B. (). Holographic relaxometry study on diffusion of anthracene structure compounds in polymethyl methacrylate. VYSAA, v. A28, no. 2, 1986, 435-439. (RZFZA, 86/6Ye878).

- 597. Lunin, B.S. (). Oscillograph measurements in pulsed infrared photochemistry. ZFKHA, no. 6, 1986, 1579.
- 598. Medovikov, A.S. (). Principles in the construction of interference rangefinders. IZTEA, no. 11, 1985, 10-12. (RZRAB, 86/5Ye558).
- 599. Misiun, R.; Warminski, L. (). Demonstration of wave interference by means of Fresnel band plates (in Polish). Fizyka w szkole, no. 4-5, 1985, 241-242. (RZFZA, 86/5A102).
- 600. Nilov, Ye.V. (GOI). Use of lasers for high-speed filming of fast-flow processes. GOI. Trudy, no. 192, 1985, 127-135. (RZFZA, 86/5L949).
- 601. Petrov, P.G. (). Refraction and differential measurements in coherent optics. OPSPA, v. 59, no. 5, 1985, 1148-1151.
- 602. Popescu, Gh. (). Single frequency He-Ne laser used as sub-angstrom detector (in English). RRPQA, no. 7, 1985, 567-571. (RZRAB, 86/5Ye597).

- 603. Popov, Yu.V.; Bednyagin, A.A.; Zakharov, A.I.; Lamanov, A.L.; Neverov, L.A.; Pobotayev, V.G.; Rossomakho, F.V. (GOI). Compact optical rangefinders and prospects for their development. GOI. Trudy, no. 192, 1985, 185-205. (RZFZA, 86/5L873).
- 604. Pyzin, G.P. (ChPI). Functional possibilities for optical systems in speckle interferometry of the shift of diffuse reflecting objects. VINITI. Deposit, no. 1473-V, 5 Mar 1986, 23 p. (RZRAB, 86/6Ye681).
- 605. Pyzin, G.P.; Artemenko, S.B.; Ignat'yev, A.G. (ChPI). Correction of rigid and deformation displacements in a speckle-interferometry displacement. ZTEFA, no. 5, 1986, 868-872.
- 606. Rinkevichyus, B.S.; Tolkachev, A.V.; Sutorshin, V.N.; Chebunin, V.G. (). Laser Doppler anemometry for the measurement of excessively slow speeds. IZTEA, no. 5, 1986, 18-20.
- 607. Rzepka, J.; Nowicki, R. (). Competition effect between rotational levels in plasma diagnostics. OPAPB, n. 1, 1985, 91-96. (RZFZA, 86/5L1315).

- 608. Smirnov, V.A.; Arkhipov, A.A.; Nanasov, M.P. (). Holographic interferometry study on resonant vibrations of structurally non-uniform plates. IVUSA, no. 6, 1986, 25-29.
- 609. Tarlykov, V.A. (). Error of a laser diffractometer of small linear dimensions, inserted with an optical Fourier process. IZTEA, no. 6, 1986, 22-23.
- 610. Tursunov, A.T.; Eshkobilov, N.B.; Akilov, R.; Korniyenko, V.V. (). Laser photoionization spectrometer. OPSPA, vol. 60, no. 6, 1986, 1284-1287.
- 611. Vasil'yev, P.Ye.; Yasyulenis, E.I.; Karmanov, L.L. (). Optical methods for experimental studies on harmonic high-frequency vibrations. CMSPMEKZ, Kiyev, Sep 1984. Materialy. Kiyev, Naukova dumka, 1986, 284-288.
- 612. Vasiliu, V.; Bachmann, P.; Maris, Z.; Moldovan, C.; Georgescu, M. (). The ELAC-1 He-Ne laser system for orientation in coal mines. SCEFA, no. 9, 1985, 838-840. (RZFZA, 86/6L1230).
- 613. Volkonskiy, V.B.; Yakovlev, V.V. (GOI). Highly accurate laser rangefinders for geophysics, hydraulic engineering and machine building. GOI. Trudy, no. 192, 1985, 217-229. (RZRAB, 86/5Ye551).

- 614. Voropay, Ye.S.; Karas', V.I.; Lomako, V.M.; Torpachev, P.A. (). Method for measuring optical characteristics of objects. Author's certificate USSR, no. 1198387, 15 Dec 1985. (RZFZA, 86/6L714).
- 615. Vus, B.S. (). Measuring elastic displacements in construction projects at sonic and ultrasonic loading frequencies. CMSPMEKZ, Kiyev, Sep 1984. Materialy. Kiyev, Naukova dumka, 1986, 288-292.
- 616. Willsch, R.; Schwotzer, G.; Jahn, J.U.; Haubenreisser, W. (). Lightguide phase sensors: current status and prospects (in German). CIWKIlme, 30th, 21-25 Oct 1985. Heft 2. Vortragsr. B. Ilmenau, 1985, 107-110. (RZRAB, 86/5Ye396).
- 617. Yakovlev, V.A. (). Using ellipsometry of anisotropic media to study surface films on crystals. PFKMD, no. 1, 1986, 23-28. (RZFZA, 86/5L53).
- 618. Zakharov, A.A.; Astrov, D.N.; Belyanskiy, L.B.; Dedikov, Yu.A.; Polunin, S.P. (VNIFTRI). Interference mercury manometer. PRTEA, no. 3, 1986, 196-201.
- 619. Zaychenko, O.V. (GOI). Chamber for holographic interferometry with a photothermoplastic medium. OPMPA, no. 6, 1986, 17-18.
- 620. Zosimov, V.V.; Lyamshev, L.M. (). Contactless measurements of high-frequency vibrations. CMSPMEKZ, Kiyev, Sep 1984. Materialy. Kiyev, Naukova dumka, 1986, 278-284.
  - 2. Laser-Excited Optical Effects
- 621. Anisimov, V.N.; Baranov, V.Yu.; Derkach, O.N.; Dykhne, A.M.; Malyuta, D.D.; Pis'mennyy, V.D.; Rysev, B.P.; Sebrant, A.Yu. (). High-speed resonance as a method of selective excitation of surface waves in solids. ZFPRA, v. 43, no. 1, 1985, 13-15.
- 622. Baltrameyunas, R.; Kuokshtis, E.; Tamulaytis, G. (). Observation of exciton luminescence in CdCe crystals. LFSBA, no. 1, 1986, 56-62. (RZFZA, 86/5L552).
- 623. Baltrameyunas, R.; Zhukauskas, A.; Tamulaytis, G. (VilGU). Screening of electron-phonon interaction in strongly excited cadmium selenide. FTPPA, no. 6, 1986, 1141-1143.

- 624. Baltrameyunas, R.; Zhukauskas, A.; Tamulaytis, G. (VilGU). The interaction of longitudinal optical phonons with overdamping non-equilibrium plasmons in GaAs. FTVTA, no. 5, 1986, 1576-1577.
- 625. Belousov, A.V.; Keloglu, O.Yu. (). Resonance transmission of energy in donor-aceptor vapors. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 83-92.
- 626. Belyakov, L.V.; Goryachev, D.N.; Sachenko, A.V.; Sreseli, O.M. (FTI). Anomalous photoeffect at a cuprous oxide electrolyte interface. FTPPA, no. 5, 1986, 876-880.
- 627. Benderskiy, V.A.; Krivenko, A.G. (IKhF). Kinetics of an emitted charge during laser photoelectron emission from a metal in solution. ELKKA, no. 6, 1986, 735-741.
- 628. Benderskiy, V.A.; Krivenko, A.G.; Kurmaz, V.A. (IKhF). Electrode reactions of methanol and ethanol radicals on mercury. ELKKA, no. 5, 1986, 644-651.
- 629. Benderskiy, V.A.; Krivenko, A.G.; Fedorovich, N.V. (IKhF). Electrode reactions of intermediate particles formed during the reduction of a bromate anion on mercury. ELKKA, no. 6, 1986, 728-734.
- 630. Blaszczak, Z. (). Inluence of molecular interactions on optical orientation of pyridine methyl derivatives. Part 1. Optical birefringence and light scattering studies (in English). ATPLB, v. A68, no. 4, 1985, 629-636. (RZFZA, 86/5L175).

- 631. Bochkarev, V.V.; Sedletskiy, O.A. (). Device to study the photoelectric properties of zinc selenide with residual conductivity in the edge region of fundamental absorption. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektronkolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 132-139.
- 632. Bochkarev, V.V.; Sedletskiy, O.A. (). Electric and photoelectric homogeneity of zinc selenide with residual conductivity. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 139-141.

- 633. Bondar', I.I.; Pudich, M.I.; Suran, V.V. (UzhGU). Formation of singly and doubly-charged ions during nonlinear ionization of strontium and barium ions by laser radiation in the 16800 -18000 cm(sup-1) frequency range. ZETFA, vol. 90, no. 6, 1986, 1952-1962.
- 634. Brazovskiy, V.Ye.; Brazovskaya, N.V. (API). Quantum theory of the motion of an adsorbate in a resonance field. VINITI. Deposit, no. 591-V, 27 Jan 1986, 13 p. (RZFZA, 86/5L479).
- 635. Bresler, M.S.; Gusev, O.B.; Stepanov, A.O. (FTI). The density of an electron-hole plasma excited in a semiconductor. FTVTA, no. 5, 1986, 1387-1392.
- 636. Bykovskiy, V.A.; Zyat'kova, N.I.; Tkachev, V.D. (BGU). Radiative recombination of excitons associated with radiation defects in germanium. FTPPA, no. 12, 1985, 2207-2209.
- 637. Chayka, M.P. (). Molecular beam self-alignment. OPSPA, vol. 60, no. 6, 1986, 1103-1106.
- 638. Damaskin, I.A.; Popovich, N.S.; Grincheshen, I.N. (). Relaxation of photoconductivity in A(sup3)B(sup5)C(sup6) compounds at conventional and high levels of optical excitation. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 104-112.

THE SECOND SECOND SECONDARY DESCRIPTION SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY SECONDARY

- 639. Dotsenko, A.V.; Zakharov, V.K.; Morozov, A.V. (GOI). Theoretical study on photothermal effects in photochromic glasses. GOI. Trudy, no. 192/2, 1985, 211-218. (RZFZA, 86/6L783).
- 640. Gastev, S.V.; Imamov, E.Z.; Sokolov, N.S.; Yassiyevich, I.N. (FTI). Optical selective pumping and quasi-resonance intervalley scattering of electrons by neutral donors in multivalley semiconductors. ZETFA, vol. 90, no. 5, 1986, 1830-1842.
- 641. Gavrilyuk, A.P.; Krasnov, I.V. (). Efficient cooling of a rarefied gas of resonance microparticles under the simultaneous action of light pressure and nonselective force. ZTEFA, no. 11, 1985, 2273-2275.
- 642. Golovko, L.N.; Negriy, V.D.; Osip'yan, Yu.A. (IFTT). Overcorrecting of defects formed under plastic deformation of cadmium sulfide. FTVTA, no. 6, 1986, 1717-1722.

- 643. Grachev, A.I.; Petrov, M.P.; Krasin'kova, M.V. (FTI). "Photovoltaic active" centers in Bi(subl2)SiO(sub20) crystals. FTVTA, no. 5, 1986, 1530-1532.
- 644. Il'inova, T.M.; Fortygin, A.A. (MGU). Dynamics of a laser probe pulse in photoexcited semiconductors. IANFA, no. 6, 1986, 1229-1234.
- 645. Ivanov, A.B. (ITM). Acceleration of [0.1-1 microgram-sized] objects in a gas laser beam. VINITI. Deposit, no. 8245-V, 28 Nov 1985, 47 p. (RZFZA, 86/5G189).
- 646. Karachevtsev, V.A. (FTINT). Triplet excitons in quasi-one-dimensional crystals of a naphthalene-tetrachlorophthalic anhydride complex with charge transfer. FTVTA, no. 5, 1986, 1400-1407.
- 647. Karlik, I.Ya.; Mirlin, D.N.; Sapega, V.F.; Yakovlev, Yu.P. (FTI). Spectrum and polarization of photoluminescence in indirect band gap semiconductor crystals of Ga(1-x)Al(x)As. FTVTA, no. 6, 1986, 1869-1875.
- 648. Karlov, N.V.; Laguchev, A.S.; Orlov, A.N.; Petrov, Yu.N.; Aleksandresku, R.; Draganesku, V.; Mikhaylesku, I.; Morzhan, I. (). Influence of laser radiation on flows of resonance molecules through capillaries in transition regions of flows. PZTFD, no. 10, 1986, 596-599.

- 649. Khabarov, S.E.; Shilova, M.V.; Orlov, V.M.; Kolosov, Ye.Ye. (GGU; GIFTI). Optical absorption in Bi(subl2)TiO(sub20) single crystals and films. IVNMA, no. 6, 1986, 1044-1046.
- 650. Khoshimov, M.M.; Blistanov, A.A.; Kiselev, B.S.; Starodubtsova, M.P.; Azamatov, Z.T. (MISIS). Linear electrooptical effect in L-lysine hydrochloride crystals. IUZFA, no. 3, 1996, 70-73.
- 651. Konovodchenko, V.A.; Sivakov, A.G.; Zhuravel', A.P.; Yefremenko, V.G.; Banduryan, B.B. (FTINT). Laser probe study on resistance states of film superconductors. FNTED, no. 5, 1986, 548-552.
- 652. Korolev, V.V.; Gritsan, N.P.; Bazhin, N.M. (IKhKG). Determination of the movement of molecular oxygen in vitreous matrices by quenching of the phosphorescence of phenanthrene. KHFID, no. 6, 1986, 730-736.

- 653. Kozlovskiy, S.I.; Moin, M.D. (IPANUK). Transverse photovoltaic effect in silicon due to the intervalley diffusion repopulation of electrons under laser excitation. FTPPA, no. 5, 1986, 806-810.
- 654. Krasheninnikov, A.A.; Shablya, A.V. (). Allowing for the effect of triplet-triplet absorption while using the optoacoustic effect to measure the quantum luminescence yield from highly excited molecular states. OPSPA, v. 60, no. 1, 1986, 70-73.
- 655. Kukhta, V.R.; Lopatin, V.V.; Petrov, P.G. (). Device for studying the initial stage of an electrical discharge in dielectrics. EOBMA, no. 3, 1986, 66-68.
- 656. Kuklev, Yu.I. (GNIIKhTES). Electron emission from ceramic plastics under CO2 laser irradiation.
  ONIITEkhim. Deposit, no. 186-KhP, 30 Jan 1986, 7 p. (PZFZA, 86/5Zh562).
- 657. Levdanskiy, V.V. (). Photoinduced drift of gases in porous objects. Energoperenos v konvektivnykh potokakh. Minsk, 1985, 119-126. (RZFZA, 86/6Ll167).
- 658. Minogin, V.G. (). Compression of atomic beams by laser-radiation pressure. OPSPA, vol. 60, no. 5, 1986, 1061-1064.
- 659. Perkal'skis, B.Sh.; Ostrovskiy, V.A. (SFTI).
  Demonstration on natural and induced optical activity
  and the Pockels effect. IVUFA, no. 6, 1986, 95-96.
- 660. Petrakovskiy, G.A.; Patrin, G.S. (IFSOAN). Effect of the optical excitation of impurity holmium ions on magnetic resonance in yttrium iron-garnet. ZETFA, vol. 90, no. 5, 1986, 1769-1780.
- 661. Seysyan, R.P.; Yuldashev, Sh.U. (FTI).
  Low-temperature photoluminescence from heteroepitaxial
  layers of lead telluride. FTVTA, no. 5, 1986,
  1348-1352.

TANT \$555555 " SECRETARY DESCRIPTION OF THE SECRETARY SECRETARY.

662. Shilova, M.V.; Orlov, V.M.; Leonov, Ye.I.; Kolosov, Ye.Ye.; Karpovich, I.A. (). Photoconductivity in manganese- and chrome-doped Bi(subl2)SiO(sub20) single crystals. IVNMA, no. 1, 1986, 103-106. (RZFZA, 86/5N567).

- 663. Skripko, G.A.; Shkadarevich, A.P.; Yermolenko, N.N.; Gorodetskaya, O.G.; Belokon', M.V.; Shagov, A.A. (BPI). Effect of radiative defects on the photoconductivity and luminescence of aluminum borosilicate copper glass. FTVTA, no. 6, 1986, 1840-1845.
- 664. Sukhodol'skiy, A.T. (IOF). Light channeling phenomena. IANFA, no. 6, 1986, 1095-1102.
- 665. Vaytkus, Yu.; Kazhukauskas, V.; Storasta, Yu. (). Overcharging of recombination and scattering centers in gallium arsenide under pulsed excitation. LSFBA, no. 6, 1985, 114-125. (RZFZA, 86/5N560).
- 666. Verkhovskaya, K.A.; Fridkin, V.M.; Shlenskiy, A.L.; Ben'kova, L.F.; Vlader, N.B.; Zolotova, V.I. (IKAN). Electrophotographic process based on pyroelectric and photovoltaic effects in polyvinylidene fluoride polymer ferroelectrics. ZNPFA, no. 3, 1986, 176-184.
- 667. Vessler, G.R.; Krylov, V.S.; Shvarts, P.; Linde, Kh. (IELAN). Optical and electrochemical study on dissipative structures in electrolyte solutions. ELKKA, no. 5, 1986, 623-628.
- 668. Yatsenko, A.V.; Sergeyev, N.A. (). Photorefractive effect in LiNbO(sub3) and its relation to nuclear paramagnetic resonance of (sup93)Nb. DUKAB, no. 12, 1985, 58-60. (RZFZA, 86/6N842).

CONTRACTOR OF THE PROPERTY OF

- 769. Zarembo, L.K.; Merkurova, S.P. (). Photoacoustic study on thermal properties of ferroelectrics in the region of phase transition. KRISA, no. 6, 1985, 1197-1199. (RZFZA, 86/5N975).
- 670. Zuyev, V.A.; Mudryy, A.V.; Bychkov, A.G. (). Luminescence in silicon films. IVUFA, no. 6, 1986, 117-119.

# 3. Laser Spectroscopy

- 671. Akhmedzhanov, R.; Bulanin, M.O.; Granskiy, P.V.; Pen'shin, A.M. (). Determining various electrooptic constants of CO2 molecules by induced absorption in the nu(sub2)+nu(sub3) band region. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 276-279.
- 672. Alimpiyev, S.S.; Zasavitskiy, I.I.; Karlov, N.V.; Kosichkin, Yu.V.; Nadezhdinskiy, A.I.; Nikiforov, S.M.; Odabashyan, G.L.; Omel'yanchuk, A.M.; Sartakov, B.G.; Stepanov, Ye.V.; Ushakov, A.I.; Khusnutdinov, A.N.; Shotov, A.P. (). Diode laser spectroscopy measurement of the instantaneous progressive temperature of a polyatomic molecular gas. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 192-196.
- 673. Aliyev, Ye.T.; Bagayev, V.S.; Belen'kiy, G.L.; Godzhayev, M.O.; Salayev, E.Yu. (IFANAz). High temperature electron-hole liquid in stratified gallium sulfide. ZFPRA, vol. 43, no. 9, 1986, 440-442.
- 674. Andreyev, S.V.; Letokhov, V.S.; Mishin, V.I. (ISAN). Laser resonance photoionization detection of the tracks of a (sup221)Fr radioactive isotope in a sample. ZFPRA, vol. 43, no. 12, 1986, 570-572.
- 675. Apanasevich, P.A.; Kilin, S.Ya.; Nizovtsev, A.P. (). Kinetic equations in the theory of absorption spectra and scattering of high-power radiation. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 1. Tomsk, 1986, 56-75.
- 676. Avarmaa, R.A.; Renge, I.V. (). Spectral evidence of the anomalous temperature dependence of luminescence decay for Eu3+ in solution. OPSPA, vol. 60, no. 5, 1986, 980-982.
- 677. Bakhrakh, V.L.; Vetchinkin, S.I.; Umanskiy, I.M.; Izleva, L.D. (). Quasiclassical theory of resonant Raman scattering. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 44-49.

678. Bayev, V.M.; Gamaliy, V.F.; Sviridenkov, E.A.; Toptygin, D.D. (FIAN). Nonlinear processes in intracavity laser spectroscopy. FIAN. Preprint, no. 347, 1985, 29 p. (RZFZA, 86/6L1178).

- 679. Bayramov, B.Kh.; Lichkova, N.V.; Timofeyev, V.D.; Toporov, V.V. (FTI). Experimental detection of fine structure in Raman spectra of RbAg(sub4)I(sub5) superionic crystals. FTVTA, no. 5, 1986, 1543-1547.
- 680. Belyayeva, A.A.; Predtechenkskiy, Yu.B. (). Effect of the environment on the spectral and temporal characteristics of thulium atoms isolated in solid neon. OPSPA, vol. 60, no. 6, 1986, 1130-1137.
- 681. Bobovich, Ya.S.; Vovk, S.M.; Petrov, V.I.; Tsenter, M.Ya.; Sharygin, L.M. (). Effect of anatase and rutile particle size on the intensity of their Raman spectra. OPSPA, v. 59, no. 6, 1985, 1390-1392.
- 682. Bolduan, F.; Hoenle, W.; Hochheimer, H.D.; Henkel, W. (). Temperature and high pressure Raman study of M(sub3)P(sub7) (M=Li, Na, K, Rb, Cs) compounds. PSSBB, v. Bl32, no. 1, 1985, 41-50. (RZFZA, 86/6L374).
- 683. Borisova, N.F.; Bukova, Ye.S.; Ladygin, I.N. (). Parameters of HDO absorption lines in the region of lasing frequencies of DF lasers. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 147-150.
- Burakov, V.S.; Malashonok, V.A.; Nechayev, S.V.; Puko, R.A.; Shedenkov, S.I. (). Study on the sensitivity of intracavity spectroscopy in dye lasers of nanosecond duration. ZPSBA, v. 44, no. 5, 1986, 757-761.
- 685. Bykov, A.D.; Gomboyev, V.Ts.; Zotov, O.V.; Makarov, V.S.; Moskalenko, N.I.; Naumenko, O.V.; Ulenikov, O.N. (). Study on the fine structure of HDO and D2O spectra around 2.5 un. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 112-114.
- 686. Bykov, A.D.; Savel'yev, V.N.; Serdyukov, V.I.; Sinitsa, L.N.; Ulenikov, O.N.; Tsyganova, Ye.V. (). Absorption spectrum of H(sub2)(sup18)O in the shortwave range. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 115-117.
- 687. Bykovskiy, P.I.; Lebedev, V.A.; Pisarenko, V.F.; Popov, V.V. (). Structure and spectral-luminescent properties of hexaaluminates of the rare-earth elements (review article). ZPSBA, v. 44, no. 5, 1986, 711-728.
- 688. Chel'tsov, V.F. (MIU). Nonlinear and stimulated effects in the resonance fluorescence of one and two atoms. KVEKA, no. 5, 1986, 1010-1016.

- 689. Dmitriyev, Yu.N.; Kulikov, A.N.; Kaledin, L.A.; Kobylyanskiy, A.I.; Shenyavskaya, Ye.A. (). Laser fluorescence spectrum of GdO molecules. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 136-140.
- 690. Dobryakov, V.V.; Monyakin, A.P.; Kuzyakov, Yu.Ya. (). Study on the spectra and laser fluorescence kinetics of MgO, CaO and SrO molecules. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 121-123.
- 691. Dobryakov, V.V.; Monyakin, A.P.; Kuzyakov, Yu.Ya. (). Automatic device to study spectra and laser fluorescence kinetics of molecules. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 124-127.
- 692. Dolzhikov, V.S.; Dolzhikov, Yu.S.; Makarov, A.A.; Movshev, V.G.; Ryabov, Ye.A. (ISAN). Resonant two-photon spectroscopy of vibrational transitions of molecules under four-wave frequency mixing. KVEKA, no. 5, 1986, 887-899.
- 693. Dolzhikov, Yu.S.; Letokhov, V.S.; Makarov, A.A.; Malinovskiy, A.L.; Ryabov, Ye.A. (ISAN). Inter- and intramolecular distribution of vibrational energy during infrared multiphoton excitation. The CF(sub3)Br molecule. ZETFA, vol. 90, no. 6, 1986, 1982-1994.
- 694. Faynberg, B.D. (). Stochastic theory of three-pulsed transient scattering to study dephasing processes. OPSPA, v. 60, no. 1, 1986, 120-125.
- 695. Gakamskiy, D.M.; Nemkovich, N.A.; Rubinov, A.N.; Tomin, V.I.; Chaykovskiy, Ye.V. (IFANB). Automated nanosecond laser spectrofluorimeter. IFANB. Preprint, no. 401, 1986, 35 p. (RZFZA, 86/6L567).
- 696. Gladkov, S.M.; Koroteyev, N.I.; Rychev, M.V.; Sergeyev, V.N.; Fedorov, A.B. (MGU). Nonlinear spectroscopy of excited atoms, molecular gases and plasma. IANFA, no. 6, 1986, 1139-1147.
- 697. Gladkov, S.M.; Koroteyev, N.I.; Rychev, M.V.; Sergeyev, V.N.; Fedorov, A.B. (MGU). Four photon spectroscopy of excited nitrogen. PZTFD, no. 12, 1986, 728-732.

- 698. Gladyshchuk, A.A.; Gurskiy, A.L.; Parashchuk, V.V.; Yablonskiy, G.P. (). Effect of temperature and illumination on streamer discharges in cadmium sulphide and selenide single crystals. ZPSBA, v. 44, no. 6, 1986, 978-982.
- 699. Goldovskiy, V.L.; Kravchenko, V.I.; Kraysler, O.D.; Terenetskaya, I.P.; Tsitkin, A.I. (IFANUk). Correlation spectrometry based on tunable multifrequency filters and lasers. IFANUk. Preprint, no. 28, 1985, 45 p. (RZFZA, 86/6L1196).
- 700. Golubev, V.G.; Ivanov-Omskiy, V.I. (). Laser photoelectric magnetospectroscopy of impurities in semiconductors. Neravnovesnyye protsessy v poluprovodnikakh (Nonequilibrium processes in semiconductors). FTI. Leningrad, 1986, 146-179.
- 701. Gorbunov, S.V.; Zakurdayev, I.V.; Muchnik, M.L.; Suslov, A.I.; Sheroziya, G.A.; Shishlakov, V.A. (). Selective laser ionization of atoms by an atomized ion beam. PZTFD, no. 11, 1986, 681-685.
- 702. Gorelik, V.S. (FIAN). Laser spectroscopy of inelastic light scattering as a method to study inhomogeneities and perturbations in solids. FIAN. Preprint, no. 103, 1985, 15 p. (RZFZA, 86/6L1195).

- 703. Govorun, D.N.; Klimenko, V.A; Korotkov, P.A. (). Interaction of low-frequency optical vibrations in a potassium-dihydrophosphate crystal. OPSPA, vol. 60, no. 5, 1986, 993-997.
- 704. Irmer, G. (). Effect of the instrument function on the determination of the transverse cross-section and lifetime of the optical phonon spectrum. EXPPA, no. 6, 1985, 501-506. (RZFZA, 86/5L277).
- 705. Irmer, G.; Heinrich, A.; Monecke, J. (). First order Raman scattering in CdSnP(sub2). PSSBB, v. Bl32, no. 1, 1985, 93-98. (RZFZA, 86/6L377).
- 706. Ivanov, A.A.; Kamalov, V.F.; Koroteyev, N.I.; Orlov, R.Yu. (MGU). Nonlinear and luminescence spectroscopy of vibrational— and electron-excited oxygen in the liquid phase. IANFA, no. 6, 1986, 1238-1245.
- 707. Kamalov, V.F.; Koroteyev, N.I.; Toleutayev, B.N.; Chikishev, A.Yu.; Shkurinov, A.P. (MGU). Picosecond active Raman spectroscopy of biological specimens. IANFA, no. 6, 1986, 1197-1201.

- 708. Katayev, M.Yu.; Mitsel', A.A.; Tinchurina, E.G. ().
  Mathematical formulation and methods for solving
  problems of gas analysis of multicomponent mixtures
  from absorption spectra. CVSMSVSR, 7th, Tomsk, 16-27
  Jun 1985. Trudy. Part 2. Tomsk, 1986, 117-121.
- 709. Kielich, S. (). Multiphoton scattering spectroscopy (in Polish). Sprawozdania Poznanskie Towarzstwo Przyjaciol Nauk, Wydzial Matematyczno-Przyrodniczy, no. 100, 1982(1984), 23-47. (RZFZA, 86/6L152).
- 710. Kink, R.A.; Kil'k, A.V.; Lepasaar, T.P.; Lykhmus, A.E.; Maksimov, Yu.A.; Mikhkel'soo, V.T.; Erme, E.K. (IFANEst). Laser vacuum ultraviolet source for high-resolution spectroscopy. KVEKA, no. 5, 1986, 999-1003.
- 711. Kiselev, A.A.; Lyaptsev, A.V.; Zuyev, A.N. (). Resonance infrared radiation interacting with 1-doubling in the microwave spectrum of a linear molecule. OPSPA, vol. 60, no. 5, 1986, 953-959.
- 712. Kochanov, V.P. (). Absorption line shape of molecular gases in the presence of a low-frequency electric field. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 271-275.
- 713. Kompan, M.Ye.; Venus, G.B.; Dimitrova, O.V.; Litvin, B.N.; Popova, T.B. (FTI). Luminescence spectra of Na(sub5)TbSi(sub4)O(sub12) superionic conductors. FTVTA, no. 6, 1986, 1944-1946.
- 714. Kornilov, S.T.; Ostreykovskiy, I.V.; Protsenko, Ye.D. (). Optothermal detectors for laser spectroscopy. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 213-217.
- 715. Kotlikov, Ye.N.; Khryashchev, L.Yu. (). Measuring the absolute intensity of an atomic beam by resonant fluorescence observations. OPSPA, v. 60, no. 1, 1986, 184-186.
- 716. Kotochigova, S.A. (). Relativistic calculation of radiationless-transition probabilites in barium. OPSPA, vol. 60, no. 6, 1986, 1116-1121.
- 717. Kovarskiy, V.A.; Keloglu, O.Yu. (). Induced separation of optical spectra of impurity pairs in solids. IZFMB, no. 2, 1986, 62-64.

- 718. Kozin, G.I.; Konovalov, I.P.; Narubin, S.L.; Protsenko, Ye.D.; Terekhin, A.V. (). Polarization method in nonlinear laser spectroscopy. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 218-221.
- 719. Krivtsun, V.M.; Nadezhdin, B.B.; Britov, A.D.; Zasavitskiy, I.I.; Shotov, A.P. (). Spectrum of NH(sub2)-radical nu(sub2) band obtained with diode lasers. OPSPA, vol. 60, no. 6, 1986, 1162-1164.
- 720. Krivtsun, V.M.; Nadezhdin, B.B.; Kuritsyn, Yu.A.; Britov, A.D.; Zasavitskiy, I.I.; Shotov, A.P. (). Diode laser spectroscopy of NH2 radicals obtained under pulsed photolysis. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 98-102.
- 721. Kuleshov, N.V.; Boykov, V.N.; Krasovskiy, A.N. (). Spectra of the selectively excited luminescence of a frozen aqueous uranylsulphate solution. ZPSBA, v. 44, no. 5, 1986, 861-863.
- 722. Kulikov, V.V.; Aganbekyan, K.A.; Gulyayev, G.A.; Plokhotnyuk, Ye.F.; Semenov, A.A.; Sokolov, A.V. (). Contribution of water vapor to selective absorption in the 9-12 um range. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 103-107.
- 723. Kulikov, V.V.; Aganbekyan, K.A.; Gulyayev, G.A.; Zhuravlev, V.Ye.; Romanovtsev, V.V. (). Automated complex and software for spectrum analysis in the IR. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 286-289.
- 724. Kuritsyn, Yu.A.; Mironenko, V.R.; Pak, I.; Snegirev, Ye.P.; Zasavitskiy, I.I.; Shotov, A.P. (). Intracavity detection of molecules by means of a tunable diode laser in the medium IR. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 203-207.
- 725. Kuz'min, M.V.; Stuchebryukhov, A.A. (). Homogeneous IR spectrum width of polyatomic molecules and threshold of intramolecular vibrational relaxation. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 4-6.
- 726. Kuznetsov, V.A.; Soboleva, L.V.; Ugarov, V.V.; Chernov, A.A.; Eventova, I.L. (IKAN). Raman spectra of light from microscopic inclusions in Y(HCOO)(sub3) 2H(sub2)O crystals and the hypothesis of an ordered near-surface layer of a solution. KRISA, no. 3, 1986, 618-621.

- 727. Kuznetsova, L.A.; Chumak, L.V. (MGU). Thermometry of heated gases by molecular spectra. Part 2. Laser diagnostic methods. VINITI. Deposit, no. 81-V, 3 Jan 1986, 27 p. (RZFZA, 86/5L340).
- 728. Latush, L.T.; Rabkin, L.M.; Torgashev, V.I.; Yuzyuk, Yu.I.; Shuvalov, L.A. (). Raman spectra and phase transitions in group IV crystals of the NaK(1-x)[NH(sub4)](x)C(sub4)H(sub4)O(sub6) 4H(sub2)O system. IANFA, no. 2, 1985, 360-364. (RZFZA, 86/6L383).
- 829. Leonov, B.A.; Malashonok, V.A.; Puko, R.A.; Skripnik, N.A.; Shedenkov, S.I. (). Nonlinear processes in intracavity laser spectroscopy. VNIILOChV. Sbornik nauchnykh trudov, no. 29, 1985, 104-109. (RZFZA, 86/6L1179).
- 730. Luk'yanenko, S.F.; Solodov, A.M. (). Using c-w tunable lasers in high-resolution intracavity spectroscopy. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 208-212.
- 731. Makarov, A.A.; Tyakht, V.V. (). IR absorption spectrum of highly excited molecules: corelation effects and relationship to intramolecular relaxation times. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 12-17.
- 732. Makushkin, Yu.S.; Petrova, A.I.; Stroynova, V.N.; Bykov, A.D. (). Calculating the halfwidth of H2O spectral lines in the microwave and IR. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 280-284.
- 733. Marinyuk, V.V. (NIFKhI). Relationship between Raman scattering intensified by adsorption and optical absorption on a silver surface in the presence of adsorbed atoms. ELKKA, no. 5, 1986, 679-682.
- 734. Meleshkin, A.V.; Gorokhovskiy, A.V.; Lipovskiy, I.M.; Rikhter, L.Ya.; Surkin, R.I. (). Determining the absolute integral band intensities in laser-excited IR fluorescence spectra. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 144-146.

BERT SESSESS SESSESS SESSESS SESSESS RESERVE TO THE SESSESS SERVERS

- 735. Nagli, L.Ye.; Stan'ko, N.G. (). Spectroscopy of upper excited states of Tl(sup+) ions in KCl-Tl. OPSPA, vol. 60, no. 6, 1986, 1292-1294.
- 736. Nakhutin, I.Ye.; Poluektov, P.P.; Timonin, V.V. (). Calibration of laser spectrometers of aerosols. ZPSBA, v. 44, no. 5, 1986, 753-757.

- 737. Petrov, V.I. (). Effect of intermediate vibronic states on inelastic three-photon scattering spectra. OPSPA, v. 59, no. 6, 1985, 1315-1320.
- 738. Pirags, M.Ya.; Auzin'sh, M.P.; Ferber, R.S. (). Experimental studies on the fluorescence spectra of He-Ne laser-excited K(sub2) molecules. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 128-132.
- 739. Potapov, S.K. (). Ultrahigh-resolution anti-Stokes Raman spectroscopy. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 171-175.
- 740. Puko, R.A.; Malashonok, V.A.; Mit'kina, N.N.; Razvina, T.I.; Verenik, V.N. (). Application of an intracavity laser spectroscopy method for the resolution of absorption spectra structure of rare-earth ions in condensed media. ZPSBA, v. 44, no. 6, 1986, 1033.
- 741. Rebane, I. (). Photochemical spectral hole burning by short pulses. ETFMB, no. 4, 1985, 438-440. (RZFZA, 86/6L1204).
- 742. Rodionov, G.D.; Saprykin, E.G. (). Forming of difference resonances by means of a polarization prism. AVMEB, no 6, 1985, 95-98.
- 743. Sapozhnikov, M.N. (NIIBIKhS). Model calculations of hole burning in the absorption spectra of complex molecules in inhomogeneous matrices: dependence of the shape of the dip on frequency and time of hole burning. FTVTA, no. 6, 1986, 1904-1907.
- 744. Semenkovich, G.V.; Strokach, N.S.; Shigorin, D.N. (NIFKhI). Study on intramolecular vibrations of aromatic aldehydes and ketones in the ground electron state. Part 1. Vibrational spectra of 2-naphthaldehyde in polarized and natural light. ZFKHA, no. 6, 1986, 1442-1447.

- 745. Serzhantov, V.G.; Surkina, R.Kh.; Surkin, R.I. (). Resonant Raman spectrum of iodine vapor. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 79-81.
- 746. Shumay, I.L.; Zadkov, V.N.; Heinzen, D.J.; Cash, M.M.; Feld, M.S. (last three from MIT, Boston). (MGU). Observation of the saturation effect in c-w active spectroscopy of liquid nitrogen. IANFA, no. 6, 1986, 1202-1205.

- 747. Sinitsa, L.N.; Tsyganova, Ye.V. (). Intracavity double optical resonance spectroscopy. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 118-120.
- 748. Smirnov, V.A. (). Errors in photometric measurements by a high-resolution raster spectrometer. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 312.
- 749. Smolenskiy, G.A.; Kolpakova, N.N.; Sher, Ye.S.; Brzhezina, B. (Czech). (FTI). Anomalous behavior of soft mode damping in an unmatched phase in Cd(sub2)Nb(sub2)O(sub7), K(sub2)SeO(sub4), and Rb(sub2)ZnBr(sub4). FTVTA, no. 5, 1986, 1417-1424.
- 750. Surkin, R.I.; Serzhantov, V.G.; Sverdlov, L.M. ().
  Raman spectrum analysis of propylene and ethylene
  under excitation at 266 nm. CVSMSVSR, 7th, Tomsk,
  16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 141-143.
- 751. Tkachuk, A.M.; Klokishner, S.I.; Petrov, M.V. (). Interionic interaction in an alpha-beta-SrF(sub2)-2YF(sub3) system and kinetics of the population of the holmium (sup5)I(sub7) term. OPSPA, vol. 60, no. 5, 1986, 983-992.
- 752. Torgashev, V.I.; Yuzyuk, Yu.I.; Smutnyy, F.; Polomska, M. (NIIFRGU). Raman scattering spectra and a high-temperature ferroelectric phase transition in LiN[H(subx)D(subl-x)](sub4)SO(sub4). FTVTA, no. 6, 1986, 1675-1682.
- 753. Trifonov, N.Yu. (). Resonant Raman spectrum analysis: intensity of higher excitations and composite frequencies. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 14-18.
- 754. Turyanitsa, I.D.; Vodop'yanov, L.K.; Rubish, V.M.; Kengerlinskiy, L.Yu.; Dobosh, M.V. (). Raman spectra and dielectric properties of Sb-S-I glasses. ZPSBA, v. 44, no. 5, 1986, 798-802.
- 755. Vandysheva, G.A.; Luk'yanenko, S.F.; Makogon, M.M.; Serdyukov, V.I.; Sinitsa, L.N. (). Intracavity laser spectrometer with negative feedback. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 300-303.
- 756. Vovk, S.M.; Sharygin, L.M.; Bobovich, Ya.S.; Gonchar, V.F.; Loguntsev, Ye.N. (). Dimensional effects in Raman spectra of hydrous tin dioxide. ZPSBA, v. 44, no. 6, 1986, 974-977.

- 757. Yegorov, V.K.; Zasavitskiy, I.I.; Kachanovskiy, A.Ye.; Maslov, A.V.; Mershavka, V.K.; Shotov, A.P. (). Measuring the absorption of molecular gases by c-w injection lasers. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 127-131.
- 758. Yegorov, V.K.; Zasavitskiy, I.I.; Kachanovskiy, A.Ye.; Maslov, V.A.; Mershavka, V.K.; Shotov, A.P. (). IR gas analyzer based on c-w injection lasers. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 183-187.
- 759. Yevseyev, I.V.; Ivliyev, S.V. (). Identification of vibrational-rotational molecular transitions by polarization echo spectroscopy. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 222-226.
- 760. Yevstaf'yev, V.V.; Smirnov, V.A. (). Improving the calibration accuracy of a wavelength scale for a high-resolution spectrometer. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 307-311.
- 761. Zakharov, A.V.; Madvaliyev, U.; Slepchenko, G.N. (). Photoacoustic effect during the nonsinusoidal modulation of light. OPSPA, vol. 60, no. 5, 1986, 1023-1025.
- 762. Zasavitskiy, I.I.; Kosichkin, Yu.V.; Kuznetsov, A.I.; Nadezhdinskiy, A.I.; Stepanov, Ye.V.; Shotov, A.P. (). Diode laser spectroscopy of collisional line broadening in polyatomic molecules. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 2. Tomsk, 1986, 138-142.
- 763. Zotov, O.V.; Makarov, V.S.; Moskalenko, N.I. (). Study on IR absorption spectra of isotopic varieties of water vapor at elevated temperatures. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Part 3. Tomsk, 1986, 108-111.

### J. BEAM-TARGET INTERACTION

# 1. Miscellaneous Targets

- 764. Abduragimov, G.A.; Meylanov, R.P.; Ugay, Ya.A. (DagGPI). Temperature distribution on the surface of a crystal during the local pulsed liberation of heat. INFZA, vol. 50, no. 6, 1986, 1013-1017.
- 765. Andreyev, A.V.; Akhmanov, S.A.; Ponomarev, Yu.V. (MGU). Scattering of x-rays by an inhomogeneous [laser-irradiated] surface under conditions of total internal reflection. IANFA, no. 6, 1986, 1206-1213.
- 766. Anisimov, V.N.; Kozolupenko, V.P.; Sebrant, A.Yu. (IAE). Formation of surface periodic structures on film coatings. KVEKA, no. 6, 1986, 1289-1292.
- 767. Bagmut, A.G.; Sokol, A.A. (). Structure and morphology of metal and semiconductor films deposited in the zone of interaction of laser radiation and a substrate. PFKMD, no. 11, 1985, 54-57. (RZFZA, 86/5Ye1097).
- 768. Birjega, M.I.; Zberea, I.; Popescu-Pogrion, N. (). Transmission electon microscopy and electron diffraction study on [CO2 laser-irradiated] gamma-Cr(sub2)O(sub3) and alpha-Cr(sub2)O(sub3) particles (in English). RRPQA, no. 9, 1985, 763-767. (RZFZA, 86/6Yell67).
- 769. Bugayev, A.A.; Zakharchenya, B.P.; Ivanov, M.G.; Merkulov, I.A. (FTI). formation of cellular structures on the surface of silicon under picosecond light action. FTVTA, no. 5, 1986, 1484-1488.
- 770. Bugayev, A.A.; Zakharchenya, B.P.; Lukoshkin, V.A. (FTI). Generation of small-scale relief structures on a silicon surface under picosecond action. PZTFD, no. 12, 1986, 710-713.
- 771. Bychkov, S.G.; Biketov, A.A.; Ramazanova, N.A.; Kim, B.G.; Ksandopulo, G.I. (KazGU). Relationship of pulse efficiency and radiation energy during the laser erosion of epoxy resins. KHFID, no. 5, 1986, 707-708.
- 772. Chmel', A.Ye.; Kondyrev, A.M.; Smirnova, Z.A. (). Effect of the molecular mass of polymers on their resistance to the action of laser radiation. VYSAA, v. A28, no. 2, 1986, 251-253. (RZFZA, 86/6Yell64).

- 773. Dikhtiyevskiy, O.V.; Martynenko, O.G.; Pavlyukevich, N.V.; Shabunya, S.I. (). Thermoelastic loading of a plate by a periodic pulsed flux of radiation. VAFEA, no. 4, 1985, 79-85. (RZFZA, 86/5Yel083).
- 774. Fedoseyev, S.A. (). Switching effect in metal--tunnel-dielectric--semiconductor structures. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 128-132.
- 775. Graichen, H.; Wolf, R.; Koehler, Th.; Zscherpe, G.
  (). Modification of contact layers by laser. FGRTA, no. 2, 1986, 78-81. (RZRAB, 86/6Ye634).
- 776. Grigorov, L.N. (ISPM). Mechanothermal desorption of macromolecules into the gas phase. DANKA, vol. 288, no. 6, 1986, 1393-1397.
- 777. Grigorov, L.N.; Chvanov, D.V. (ISPM). Laser-induced desorption of superheavy polymer ions. DANKA, vol. 288, no. 3, 1986, 654-656.
- 778. Kahlert, V. (). Device for surface scanning by a laser beam. Patent GDR, no. 226401, 21 Aug 1985. (RZRAB, 86/5Ye190).
- 779. Kuklev, Yu.I.; Uglov, A.A. (GNIIKhTES). Thermal action of IR laser radiation on transluscent media. ONIITEkhim. Deposit, no. 187-KhP, 30 Jan 1986, 11 p. (RZFZA, 86/5L1266).

- 780. Levdanskiy, V.V. (ITMO). Effect of an electrical field on the flow of rarefied gases in capillaries. ZFKHA, no. 5, 1986, 1269-1271.
- 781. Manenkov, A.A.; Prokhorov, A.M. (). Laser damage to transparent solids. UFNAA, v. 148, no. 1, 1986, 179-211. (RZRAB, 86/6Ye706).
- 782. Nowak, S.; Gola, E. (). Effect of laser trimming on the stability of thick film resistors (in English). PNITB, no. 30, 1985, 73-76. (RZRAB, 86/5Ye613).
- 783. Pristrem, A.M.; Demchuk, A.V.; Danilovich, N.I. (MRI). Local initiation of a molten phase under the pulsed laser annealing of silicon. ZTEFA, no. 6, 1986, 1220-1224.

- 784. Rodin, P.R. (book reviewer); Kovalenko, V.S.;
  Kotlyarov, V.P.; Dyatel, V.P.; Golovko, L.F.;
  Romanenko, V.V. (authors of reviewed book). ().
  Review of book: Spravochnik po tekhnologii lazernoy obrabotki (Handbook on the technology of laser processing), Kiyev, Tekhnika, 1985, 168 p. EOBMA, no. 3, 1986, 85-86.
- 785. Seleznev, B.I.; Tkal', V.A.; Yemel'yanova, G.M. (NovgPI). IR spectrum analysis of structural reconstructions in laser-irradiated silicon dioxide films. VINITI. Deposit, no. 8930-V, 26 Dec 1985, 24 p. (RZFZA, 86/6Yell70).
- 786. Ugay, Ya.A.; Khoviv, A.M.; Nazarenko, I.N.; Dubov, S.I. (VGU). Increasing the rate of oxidation under the action of laser radiation on silicon. ZFKHA, no. 6, 1986, 1554-1556.
- 787. Vorob'yev, V.S. (IVTAN). Mechanism of absorbtion of laser radiation in a molecular vapor jet. TVYTA, no. 3, 1986, 609-612.
- 788. Yemel'yanov, V.I.; Seminogov, V.N. (). Theory of the generation of small-scale and "double" modulations of surface relief in media under the action of high-power electromagnetic radiation. PFKMD, no. 11, 1985, 145-149. (RZFZA, 86/5Yel082).
- 789. Yeremeyeva, Ye.P.; Votinov, M.P.; Dokukina, A.F.; Ovchinnikov, V.M.; Smirnova, Z.A. (GOI). Effect of low-molecular additives on the radiation resistance of transparent polymers. OPMPA, no. 6, 1986, 48-50.

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#### 2. Metal Targets

- 790. Alimov, D.T.; Yedvabnyy, I.V.; Khabibullayev, P.K.(). Reduction of metal oxides under laser heating. FKOMA, no. 3, 1986, 10-13.
- 791. Anisimov, V.N.; Baranov, V.Yu.; Vladimirtseva, L.A.; Kopetskiy, Ch.V.; Kraposhin, V.S.; Malyuta, D.D.; Pis'mennyy, V.D.; Serbrant, A.Yu.; Shakhlevich, K.V. (IPTMOM; IAE). Metastable phase formation during the laser irradiation of nickel in a carbon-containing environment. DANKA, vol. 288, no. 4, 1986, 866-869.
- 792. Basharin, A.Yu.; Osipov, O.I. (IVTAN). Study on surface temperature changes of metal products under laser heating. TVYTA, no. 3, 1986, 612-614.

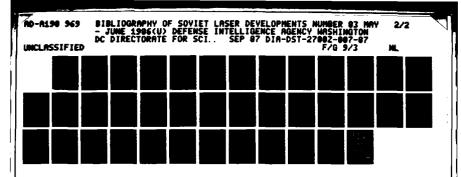
- 793. Bertyayev, B.I.; Zavestovskaya, I.N.; Igoshin, V.I. (). Comparative analysis of two and three step thermal cycles during the laser surface quenching-hardening of steel. FKOMA, no. 3, 1986, 88-95.
- 794. Bonch-Bruyevich, A.M.; Kalabushkin, O.I.; Kaporskiy, L.N.; Libenson, M.N.; Minayev, S.M.; Salyadinov, V.S. (). Kinetics of self-sustaining oxidation of titanium plates in a gas flow. PZTFD, no. 12, 1986, 714-718.
- 795. Borodina, G.G.; Kraposhin, V.S.; Kurochkin, Yu.V.; Stepanov, V.V. (). Effect of laser surface hardening on the fatigue strength of steel. PFKMD, no. 1, 1986, 123-127. (RZRAB, 86/5Ye606).
- 796. Bunkin, F.V.; Kirichenko, N.A.; Luk'yanchuk, B.S.; Morozova, Ye.A.; Morozov, Yu.Yu.; Simakin, A.V. (IOF). Metal ignition in air upon exposure to continuous wave laser radiation. KVEKA, no. 6, 1986, 1227-1234.
- 797. Bunkin, F.V.; Kirichenko, N.A.; Morozov, Yu.Yu. (IOF). Laser heating and metal burning upon oblique radiation incidence. KVEKA, no. 5, 1986, 993-998.
- 798. Danileyko, Yu.K.; Ivanov, A.D.; Kozikov, V.A.; Prokhorov, A.M.; Pchelintsev, A.I.; Sorokin, V.N.; Kholodenko, E.B. (IOF; GAZ). Industrial unit using YAG:Nd3+ lasers. KVEKA, no. 5, 1986, 1087.

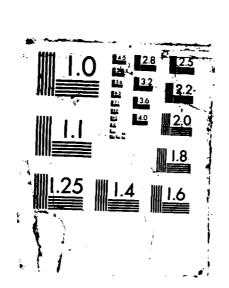
Kees accessa telescent property consist formation of the source of telescent besides telescent benefit

- 799. Goncharov, V.K.; Karaban', V.I.; Ostrometskiy, V.A. (NIIPFP). Laser radiation shielding by damage products of various metals. KVEKA, no. 6, 1986, 1235-1240.
- 800. Isavediyev, A.A.; Malkhozov, M.F. (). Effect of laser waves on the surface radiation from metals in the infrared. PFKMD, no. 2, 1986, 5-9. (RZFZA, 86/6L1154).
- 801. Izmaylov, Ye.A.; Gorbach, V.G.; Gorbaneva, I.I. (). Austenizing of cast iron under the action of pulsed laser radiation. IZNMA, no. 3, 1986, 137-140.
- 802. Kogan, A.N.; Mirkin, L.I.; Tikhononva, N.P. ().
  Monte Carlo method of the formation of a structure of
  thin layers during laser metal sputtering. FKOMA, no.
  3, 1986, 52-56.

- 803. Korlyakov, V.K.; Solodyankin, V.V.; Bulatov, Ye.I.; Kordyukov, N.I. (). Automatic device for acoustic quality control of pulsed laser welding. DEFKA, no. 11, 1985, 80-81. (RZRAB, 86/5Ye602).
- 804. Kovalenko, V.S.; Vayner, G.M.; Golovko, L.F. (). Effect of c-w laser radiation on the structure and properties of titanium alloys. EOBMA, no. 3, 1986, 15-17.
- 805. Kurichenko, A.L.; Ivliyev, A.D.; Zinov'yev, V.Ye. (SGI). Study on the thermal properties of rare-earth metals using modulated laser radiation. TVYTA, no. 3, 1986, 493-499.
- 806. Manokhin, A.I.; Uglov, A.A.; Gorbach, A.F.; Smurov, I.Yu.; Mirkin, L.I. (IMET). Laser-plasma synthesis of carbide refractory alloys in carbon-containing media. DANKA, vol. 288, no. 3, 1986, 625-628.
- 807. Poletika, I.M.; Borisov, M.D.; Gladyshev, S.A.; Svirchev, N.Ye.; Proshkin, V.V.; Mikhlyayeva, N.V.; Sukhovarov, V.F. (). Alloying of low-carbon steel with the aid of high intensity sources. FKOMA, no. 3, 1986, 135-138.
- 808. Poyurovskaya, I.Ye.; Men Chun Von (OGU). Action of intense radiation on metals under rapid forced air cooling. PZTFD, no. 10, 1986, 582-586.

- 809. Shirokanov, A.D.; Yankovskiy, A.A. (). Destruction of metals under the action of laser pulses of microsecond duration. ZPSBA, v. 44, no. 6, 1986, 929-932.
- 810. Tutunaru, M.; Steimbrecher, G.; Mihailescu, I.N. (). Temperature field inside a metal sample subjected to high-power c-w laser irradiation (in English). RRPQA, no. 9, 1985, 789-792. (RZFZA, 86/6Yell73).
- 811. Uglov, A.A.; Smurov, I.Yu.; Ignat'yev, M.B.; Mirkin, L.I.; Krapivin, L.L. (). Calculation of fusion processes during the laser-plasma synthesis of metal nitrides in a nitrogen atmosphere at an elevated pressure. FKOMA, no. 3, 1986, 18-20.
- 812. Vorob'yev, V.S.; Maksimenko, S.V.; Khomkir, A. ... (IVTAN). Kinetics of metal vapor breakdow: combeam in an atmosphere of atomic dat. Filling 1986, 714-720.





# 3. Dielectric Targets

- 813. Abdupatayev, R.; Bedilov, M.R. (IYaFANUz). Laser damage to silicate glasses and generation of a multielement plasma. IYaFANUz. Preprint, no. R-6-192, 1985, 13 p. (RZFZA, 86/6Yell65).
- 814. Buzhinskiy, I.M.; Pozdnyakov, A.Ye. (GOI). Probability of destruction of optical glass in wide laser beams. OPMPA, no. 5, 1986, 24-25.

- 815. Kask, N.Ye.; Kovalev, M.A.; Fedorov, G.M.; Chopornyak, D.B. (NIIYaF). Initial stage of laser damage to glass by optical and microwave methods. KVEKA, no. 6, 1986, 1180-1184.
- 816. Tribel'skiy, M.I. (NIOPIK). Optical breakdown of dielectrics by a determined non-equilibrrum variation in their optical characteristics in the vicinity of an absorbing switch. ZTEFA, no. 5, 1986, 831-838.
- 817. Voicu, L.; Stamatescu, L.; Hening, Al.; Raetchi, V.; Mihailescu, I.N.; Nanu, L. (). Signals generated by lead zirconium titanate (PZT) ceramics when irradiated by microsecond pulsed TEA-CO2 laser pulses (in English). PSSAB, v. A91, no. 2, 1985, K103-K106. (RZFZA, 86/6L1161).

# 4. Semiconductor Targets

- 818. Arutyunov, Ye.N.; Vasil'yev, A.N.; Karpov, S.Yu.; Koval'chuk, Yu.V.; Myachin, V.Ye.; Pogorel'skiy, Yu.V. (). Study on luminescence properties of A(sup3)B(sup5) semiconductors after laser processing. Neravnovesnyye protsessy v poluprovodnikakh (Nonequilibrium processes in semiconductors). FTI. Leningrad, 1986, 180-201.
- 819. Balandin, V.Yu.; Dvurechenskiy, A.V.; Aleksandrov, L.N. (). Modeling of structural transformations in amorphous silicon layers under pulsed heating. PFKMD, no. 1, 1986, 53-60. (RZFZA, 86/6Yell71).
- 820. Blokh, M.D.; Magarill, L.I.; Saptsov, V.I.; Skok, E.M. (IFPSOAN). Study on two-phonon magnetic resonance of acoustic phonons in semiconductors. FTVTA, no. 5, 1986, 1470-1478.

- 821. Budyanu, V.A.; Damaskin, I.A.; Zenchenko, V.P.;
  Nasakin, A.A.; Pyshkin, S.L.; Fedoseyev, S.A.;
  Chechuy, S.N. (). Obtaining film structures from a
  laser erosion plasma. Opticheskiye i kineticheskiye
  effekty v neravnovesnykh elektronnykh i
  elektron-kolebatel nykh sistemakh. IPFANM. Kishinev,
  Shtiintsa, 1986, 113-128.
- 822. Demchuk, A.V.; Kazyuchints, N.M.; Pristrem, A.M.; Danilovich, N.I.; Patrin, A.A. (). Photoluminescent investigation of dislocation structure formation in silicon under the action of scanning laser radiation. ZPSBA, v. 44, no. 5, 1986, 776-780.
- 823. Gromov, G.G.; Ufimtsev, V.B.; Rudenko, K.V. (). Topography of periodic structures on the surface of indium antimonide. PFKMD, no. 12, 1985, 80-86. (RZFZA, 86/6Yell72).
- 824. Gromov, G.G.; Zhuk, S.V.; Ufimtsev, V.B. (MITKhT).

  Numerical modeling of the action of pulsed laser
  radiation on semiconductors. ONIITEkhim. Deposit, no.
  189-KhP, 30 Jan 1986, 27 p. (RZFZA, 86/6L1151).
- 825. Korshunov, A.B.; Gas'kov, A.M. (). Possible mechanism of laser p-n conversion at the surface of indium antimonide. PFKMD, no. 1, 1986, 61-69. (RZFZA, 86/5Ye1093).
- 826. Leyderman, A.Yu.; Karageorgiy-Alkalayev, P.M. (). Processes of photostimulated cluster formation in semiconductors with impurity-defect interaction. DANUA, no. 9, 1985, 21-23. (RZFZA, 86/5Yel086).
- 827. Varshava, S.S.; Pelekh, L.N. (LvPI). Effect of laser irradiation on the electric properties of Si and GaAs whiskers. UkrNIINTI. Deposit, no. 2677-Uk, 5 Dec 1985, 10 p. (RZFZA, 86/6L1152).
- 828. Yemel'yanov, V.I.; Uvarova, I.F. (MGU). Nonlinear optical deformation of an acoustic subsystem and ultrafast melting of the surface of semiconductors by short laser pulses. IANFA, no. 6, 1986, 1214-1219.

#### K. PLASMA GENERATION AND DIAGNOSTICS

- 829. Balandikov, A.N.; Beznogikh, Yu.D.; Volkov, V.I.; Govorov, A.I.; Zabolotin, V.P.; Zinov'yev, L.P.; Isayev, A.S.; Karpov, I.I.; Kulikov, I.I.; Makarov, L.G.; Monchinskiy, V.A.; Perfeyev, V.N.; Pikin, A.I.; Seleznev, V.V.; Semenyushkin, I.N.; Fedukov, S.V.; Sherstyanov, D.I.; Chernikov, V.I. (OIYaI). Synchrophasotron at the Joint Institute of Nuclear Research. Work and completion, July-December 1984. OIYaI. Soobshcheniye, no. 9-85-511, 1985, 12 p. (RZFZA, 86/6V483).
- 830. Basov, N.G.; Grasyuk, A.Z.; Losev, L.L.; Meshalkin, Ye.A. (FIAN). Laser plasma detection. IANFA, no. 6, 1986, 1087-1094.
- 831. Basov, N.G.; Sklizkov, G.V.; Brunner, W.; Junge, K. (). Study on laser plasmas for nuclear fusion (in German). ANPYA, no. 4-6, 1985, 394-408. (RZFZA, 86/6G123).
- 832. Borovskiy, A.V.; Korobkin, V.V.; Mukhtarov, Ch.K. (IOF). Analytical theory of gain in the far UV greater than 50 nm at transitions of H ions in a freely disintegrating plasma. IANFA, no. 6, 1986, 1158-1166.
- 833. Bozhokin, S.V.; Choban, E.A. (LPI). Calculation of the speed of a thermonuclear reaction in a high-temperature plasma. ZTEFA, no. 5, 1986, 966-968.
- 834. Brunov, V.V.; Gorbunov, A.A.; Konov, V.I. (). Spectrum analysis of the initial stage of optical breakdown near a solid surface. ZPSBA, v. 44, no. 5, 1986, 845-849.
- 835. Bryunetkin, B.A.; Derzhiyev, V.I.; Dyakin, V.M.; Mayorov, S.A.; Yakovlenko, S.I. (VNIFTRI). Observation of lasing during a 4f-5g transition at 253 NM of a Be IV ion in a recombined laser plasma. PZTFD, no. 10, 1986, 613-617.

836. Bunkin, F.F.; Derzhiyev, V.I.; Karalin, A.V.; Nefedov, A.L.; Subbotin, V.I.; Kharitonov, V.V.; Chikin, K.R.; Yakovlenko, S.I. (IOF). Steady-state reactor-laser with surface pumping. IOF. Preprint, no. 321, 1985, 54 p. (RZFZA, 86/6L932).

- 837. Dick, M.; Fedotov, S.I.; Foerster, E.; Goetz, K.; Hegner, M.; Kalashnikov, M.P.; Koch, R.; Mikhaylov, Yu.A.; Neumann, N.; Nickles, P.V.; Rode, A.V.; Schafer, K.; Sklizkov, G.V.; Sommer, G.; Zimmer, W.D. (). X-ray spectroscopy and microscopy of laser-produced thermonuclear plasmas (in English). X 84. International Conference on X-Ray and Inner-Shell Process--Atoms, Molecules and Solids, Leipzig, 20-24 Aug 1984. Conference Proceedings. Leipzig, 1984, 155-163. (RZFZA, 86/6G138).
- 838. Golubev, A.A.; Latyshev, S.V.; Rudskioy, I.V.; Sharkov, B.Yu. (). Effect of triple recombination on the charged composition and temperature of a spreading laser plasma. PZTFD, no. 9, 1986, 513-516.
- 839. Gus'kov, S.Yu.; Lebo, I.G.; Rzanov, V.B.; Trebuleva, L.Ye. (FIAN). Solving the kinetic equation for alpha particles in laser targets, allowing for spontaneous magnetic fields. FIAN. Preprint, no. 24, 1986, 47 p. (RZFZA, 86/6G273).
- 840. Iova, I.; Chera, I. (). Effects of the interaction between He-Ne laser radiation and a hollow cathode plasma (in English). RRPQA, no. 9, 1985, 745-753. (RZFZA, 86/6G346).
- 841. Karlov, N.V.; Kononov, N.N.; Kuz'min, G.P.; Nesterenko, A.A.; Toker, G.R. (IOF). Supersonic turbulent regime of the propagation of an optical discharge. PZTFD, no. 9, 1986, 570-575.
- 842. Korobkin, V.V.; Marin, M.Yu.; Pil'skiy, V.I.; Polonskiy, L.Ya.; Pyatnitskiy, L.N.; Reyngol'd, A.V. (IVTAN). Physical properties and laws governing the development of continuous extended laser sparks. IVTAN. Preprint, no. 5/179, 1985, 36 p. (RZFZA, 86/5L1261).
- 843. Latyshev, S.V.; Rudskoy, I.V. (ITEF). Temperature of a plasma under quasi-steady-state laser heating. ITEF. Preprint, no. 2, 1986, 14 p. (RZFZA, 86/5G94).
- 844. Lominadze, Dzh.G.; Tsikarishvili, E.G.; Moiseyev, S.S. (). Role of relativistic effects in the absorption of high-power laser radiation by a plasma. Problemy nelineynykh i turbulentnykh protsessov v fizike. Mezhdunarodnaya rabochaya gruppa, 2nd, Kiyev, 1983. Trudy. Part 1. Kiyev, Naukova dumka, 1985, 366-368. (RZFZA, 86/6G124).

- 845. Mazing, M.A.; Panin, A.M.; Shevel'ko, A.P. (). Spectra of Ca XIX and Ti XXI helium-like ions in a laser plasma. OPSPA, vol. 60, no. 5, 1986, 910-915.
- 846. Meyyerovich, B.E. (IFP). Enroute to the achievement of electromagnetic collapse. UFNAA, vol. 149, no. 2, 1986, 221-257.
- 847. Motylev, S.L. (IOF). Generation of eddies and spontaneous magnetic fields in a laser plasma. IOF. Preprint, no. 27, 1986, 13 p. (RZFZA, 86/6G122).
- 848. Silant'yev, A.Yu. (). Numerical solution of the problem on the interaction between laser radiation and a c-w optical discharge plasma. Elementarnyye protsessy v khimicheski reagiruyushchikh sredakh.

  Moskva, 1985, 52-55. (RZFZA, 86/5G342).
- 849. Silant'yev, A.Yu. (). Flow rate of a gas in a laser plasmatron. Elementarnyye protsessy v khimicheski reagiruyushchikh sredakh. Moskva, 1985, 56-58. (RZFZA, 86/5G425).
- 850. Vasil'yev, B.I.; Grasyuk, A.Z.; Losev, L.L.; Meshalkin, Ye.A. (FIAN). Dynamics of the change in voltage of a charged target under the influence of a laser plasma. ZTEFA, no. 5, 1986, 873-877.
- 851. Vasil'yev, B.I.; Grasyuk, A.Z.; Losev, L.L.; Meshalkin, Ye.A. (FIAN). Laser-plasma detection. ZETFA, vol. 90, no. 5, 1986, 1635-1645.
- 852. Zakharchenko, S.V.; Semenov, L.P.; Sintyurin, G.A. (IEM). Optical discharge in decreased-density air with solid impurities. KVEKA, no. 5, 1986, 1040-1042.
- 853. Zaydel', A.N. (FTI). The use of holographic interferometry for plasma diagnostics. UFNAA, vol. 149, no. 1, 1986, 105-138.

# III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

- 854. Aleksandrov, L.N.; Zolotkov, V.D.; Mordyuk, V.S. (). growth and radiation defects of luminophor crystals for light sources. Rostovyye i radiatsionnyye defekty kristallov lyuminoforov dlya istochnikov sveta. (RZFZA, 86/6Ye1001).
- 855. Alferov, Zh.I.; Shmartsev, Yu.V. (eds). (). Photodetectors and photoconverters. Fotopriyemniki i fotopreobrazovateli. FTI. Leningrad, Nauka, 1986, 296 p.
- 856. All-Union Conference on Coherent and Nonlinear Optics, 12th, Moscow, 26-29 Aug 1985. Summaries of the reports. Parts 1 and 2. CVKKNOpt, 12th, Moskva, 26-29 Aug 1985. Tezisy dokladov. Moskva, 1985. Chast 1, 431 p. Chast 2, 418 p. (RZRAB, 86/6Ye5-6).
- 857. Bakirov, M.Ya. (). Electronic instruments based on Ge-Si solid solutions. Elektronnyye pribory na osnove tverdogo rastvora Ge-Si. Baku, Elm, 1986, 139 p. (RZFZA, 86/6N327).
- 858. Banakh, V.A.; Mironov, V.L. (auths); Zuyev, V.Ye. (ed). (IOA). Ranging propagation of laser radiation in a turbulent atmosphere. Lokatsionnoye rasprostraneniye lazernogo izlucheniya v turbulentnoy atmosfere. Novosibirsk, Nauka, 1986, 176 p.
- 859. Basov, N.G. (ed). (FIAN). Wavefront reversal of laser radiation. Obrashcheniye volnovogo fronta lazernogo izlucheniya. FIAN. Trudy, no. 172, Moskva, Nauka, 1986, 184 p.
- 860. Borodin, P.M.; Labzovskiy, L.N. (eds). (). Physical fundamentals of quantum radiophysics. Fizicheskiye osnovy kvantovoy radiofiziki. LGU. Leningrad, 1985, 320 p. (RZFZA, 86/5Zh2).
- 861. Chetverushkin, B.N. (). Mathematical modeling of problems of the dynamics of a radiating gas.

  Matematicheskoye modelirovaniye zadach dinamiki izluchayushchego gaza. Moskva, Nauka, 1985, 304 p. (RZFZA, 86/5136).

- 862. Davydov, A.S.; Chernousenko, V.M. (eds). ().
  Problems on nonlinear and turbulent processes in
  physics. International Working Group, 2nd, Kiev, 1983.
  Proceedings. Part 1. Problemy nelineynykh i
  turbulentnykh protsessov v fizike. Mezhdunarodnaya
  rabochaya gruppa, 2nd, Kiyev, 1983. Trudy. Chast' 1.
  Kiyev, Naukova dumka, 1985, 453 p. (RZFZA, 86/6G62).
- 863. Denisyuk, Yu.N. (ed). (). Optical holography with recording in three-dimensional media. Opticheskaya golografiya s zapis'yu v trekhmernykh sredakh. OOFA. NPGAN. Leningrad, Nauka, 1986, 112 p.
- 864. Gas lasers in metrology. Gazovyye lazery v metrologii. MIFI. Moskva, Energoatomizdat, 1986, 76 p. (RZFZA, 86/6L1222).
- 865. Gaysenok, V.A.; Sarzhevskiy, A.M. (). Anisotropy of absorption and luminescence in polyatomic molecules. Anizotropiya pogloshcheniya i lyuminestsentsii mnogoatomnykh molekul. Minsk, Universitetskoye, 1986, 318 p. (RZFZA, 86/6L75).
- 866. Information processing in communications systems.
  Obrabotka informatsii v sistemakh svyazi. EIS.
  Leningrad, 1985, 168 p. (RZFZA, 86/6Zh73).

- 867. Ismailov, I. (auth); Yeliseyev, P.G. (ed). ().
  Optoelectronic radiative instruments based on indium
  phosphide and related materials. Optoelektronnyye
  izluchatel nyye pribory na osnove fosfida indiya i
  rodstvennykh materialov. FTIANTadzh. Dushanbe, Donish,
  1986, 207 p.
- 868. Izvozchikov, V.A. (ed). (). Wideband semiconductors and dielectrics. Shirokozonnyye poluprovodniki i dielektriki. LGPI. Leningrad, 1985, 162 p. (RZFZA, 86/5N384).
- 869. Kaminskiy, A.A.; Aminov, L.K.; Yermolayev, V.L.;
  Korniyenko, A.A.; Kravchenko, V.B.; Malkin, B.Z.;
  Mill', B.V.; Perlin, Yu.Ye.; Petrosyan, A.G.; Pukhov,
  K.K.; Sakun, V.P.; Sarkisov, S.E.; Sveshnikova, Ye.B.;
  Skripko, G.A.; Starostin, N.V.; Shkadarevich, A.P.
  (auths); Kaminskiy, A.A. (ed). (). Physics and
  spectroscopy of laser crystals. Fizika i
  spektroskopiya lazernykh kristallov. IKAN. Moskva,
  Nauka, 1986, 272 p.
- 870. Kirillin, V.A. (). Pages from the history of science and technology. Stranitsy istorii nauki i tekhniki. Moskva, Nauka, 1986, 511 p. (RZFZA, 86/5A32).

- 871. Klyshko, D.N. (auth); Rukhadze, A.A. (ed). ().
  Physical fundamentals of quantum electronics.
  Fizicheskiye osnovy kvantovoy elektroniki. Moskva,
  Nauka, 1986, 296 p.
- 872. Kochanov, V.P. (ed). (). All-Union Symposium on Molecular Spectroscopy of High and Ultrahigh Resolution, 7th, Tomsk, 16-27 Jun 1985. Proceedings. Parts 1,2,3. CVSMSVSR, 7th, Tomsk, 16-27 Jun 1985. Trudy. Tomsk, 1986. Chast' 1, 121 p. Chast' 2, 267 p. Chast' 3, 326 p.
- 873. Kochelap, V.A.; Pekar, S.I. (auths); Mashkevich, V.S. (ed). (). Theory of spontaneous and stimulated chemiluminescence in gases. Teoriya spontannoy i stimulirovannoy khemilyuminestsentsii gazov. IPANUk. Kiyev, Naukova dumka, 1986, 264 p.
- 874. Kovarskiy, V.A.; Sinyavskiy, E.P. (eds). (). Optical and kinetic effects in nonequilibrium electron and electron-vibrational systems. Opticheskiye i kineticheskiye effekty v neravnovesnykh elektronnykh i elektron-kolebatel'nykh sistemakh. IPFANM. Kishinev, Shtiintsa, 1986, 148 p.
- 875. Kulipanov, G.N. (ed). (). All-Union Conference on the Use of Synchrotron Radiation, 6th, Novosibirsk, 4-6 Jul 1984. Proceedings. CVSISIz1, 6th, 4-6 Jul 1984. Trudy. IYaFSOAN. Novosibirsk, 1984, 356 p. (RZFZA, 86/6V9).
- 876. Mezenov, A.V.; Soms, L.N.; Stepanov, A.I. ().
  Thermooptics of solid state lasers. Termooptika
  tverdotel'nykh lazerov. Leningrad, Mashinostroyeniye,
  1986, 199 p.
- 877. Minogin, V.G.; Letokhov, V.S. (). Laser radiation pressure on atoms. Davleniye lazernogo izlucheniya na atomy. Series: Sovremennyye problemy fiziki (Current problems in physics). Moskva, Nauka, 1986, 224 p.
- 878. Photosensitive materials for photographic recording of optical information. Svetochuvstvitel'nyye materialy dlya fotograficheskoy registratsii opticheskikh informatsii. VGNIPIKFP. Moskva, 1985, 192 p. (RZFZA, 86/5L907).

\_ \$550,500 \_ \$25,5000 \_ \$1,00000 \_ \$250,000

- 879. Problems in measuring the frequency characteristics of laser radiation and their metrological provision. Voprosy izmereniya chastotnykh kharakteristik izlucheniya lazerov i ikh metrologicheskoye obespecheniye. VNIIM. Leningrad, 1984, 86 p. (RZFZA, 86/5L1132).
- 880. Rykalin, N.N.; Uglov, A.A.; Anishchenko, L.M. (). High-temperature industrial processes. Thermophysical fundamentals. Vysokotemperaturnyye tekhnologicheskiye protsessy: Teplofizicheskiye osnovy. Moskva, Nauka, 1986, 172 p. (RZFZA, 86/5Yel0).
- 881. Sivukhin, D.V. (MFTI). General course on physics. Optics. Obshchiy kurs fiziki. Optika. 2nd edition, revised. Moskva, Nauka, 1985, 751 p. (RZFZA, 86/5A35).
- 882. Solomatin, V.A.; Shilin, V.A. (). Optoelectronic phase transducers. Fazovyye optiko-elektronnyye preobrazovateli. Series: Biblioteka priborostroitelya (Instrument maker's library). Moskva, Mashinostroyeniye, 1986, 145 p.
- 883. Ternov, I.M.; Mikhaylin, V.V.; Khalilov, V.R. (). Synchrotron radiation and its application. Sinkhrotronnoye izlucheniye i yego primeneniya. 2nd edition revised and enlarged. MGU. Moskva, 1985, 264 p. (RZFZA, 86/5A41).
- 884. Uldashev, B. (). Lazernoye izlucheniye. Laser radiation. Series: Besedy o nauke (Talks on science), no. 51. Tashkent, Uzbekistan, 1985, 24 p. (KNLTA, 18/86, 15973).
- 885. World Congress of IMEKO [Internationales Messtechnische Konfoederation, International Measurement Confederation], 10th, Prague, 22-2 6 Apr 1985. (All in English). CWCIMEKO, 10th, Pr'aha, 22-26 Apr 1985. Preprints. Praha, Dum techn. CSVTS. Vol. 1, 256 p. (RZFZA, 86/6A33). Vol. 2, 168 p. (RZRAB, 86/6Ye6).
- 886. Zuyev, V.Ye.; Krekov, G.M. (). Optical models of the atmosphere. Current problems of atmospheric optics. Vol. 2. Opticheskiye modeli atmosfery. Sovremennyye problemy atmosfernoy optiki. Tom 2. Leningrad, Gidrometeoizdat, 1986, 256 p.

## IV. SOURCE ABBREVIATIONS

(Note: CTC = cover-to-cover translation available)

AKZHA Akusticheskiy zhurnal (CTC)

ANPYA Annalen der Physik (Leipzig)

ARAKB Archiwum akustyki (Warsaw)

ATPLB Acta physica polonica. Series A

AVMEB Avtometriya (CTC)

BWATA Biuletyn Wojskowej akademii technicznej

imeni Jaroslawa Dabrowskiego

CISHPMST International Symposium: High-Purity

Materials, Science and Technology

CIWKIlme Internationales wissenschaftliches Kolloquium,

Ilmenau

CMSPMEKZ Mezhdunarodnyy seminar: Prochnost'

materialov i elementov konstruktsiy pri zvukovykh chastotakh nagruzheniya

CVKKNOpt Vsesoyuznaya konferentsiya po kogerentnoy i

nelineynoy optike

CVSISIzl Vsesoyuznoye soveshchaniye po ispol'zovaniyu

sinkhrotonnogo izlucheniya

CVSMSVSR Vsesoyuznyy simpozium po molekulyarnoy

spektroskopii vysokogo i sverkhvysokogo

razresheniya

CWCIMEKO World Congress of IMEKO [Internationale

Messtechnische Konfoederation, International

Measurement Confederation!

CZYPA Czechoslovak Journal of Physics

DANAA Akademiya nauk Armyanskoy SSR. Doklady

DANKA Akademiya nauk SSSR. Doklady (CTC)

Akademiya nauk Uzbekskoy SSR. Doklady DANUA

DAZRA Akademiya nauk Azerbaydzhanskoy SSR. Doklady

Defektoskopiya (CTC) DEFKA

Akademiya nauk Ukrayns'koy RSR. Dopovidi. **DUKAB** Seriya A. Fiziko-matematychni ta tekhnichni

nauki

Elektronika (Warsaw) EKNTB

Elektrokhimii (CTC) **ELKKA** 

Elektronnaya obrabotka materialov (CTC) **EOBMA** 

Akademiya nauk Estonskoy SSR. Izvestiya. ETFMB

Fizika, matematika

Eksperimentelle Technik der Physik **EXPPA** 

Feingeraetetechnik **FGRTA** 

Fizika goreniya i vzryva (CTC) **FGVZA** 

Fizika plazmy (Moskva, AN SSSR) (CTC) FIPLD

Fizika v shkole FIZSA

**FKOMA** Fizika i khimiya obrabotki materialov

Finomechanika, mikrotechnika (Budapest) FNMKA

Fizika nizkikh temperatur (Kiyev) (CTC) **FNTED** 

Fizika i tekhnika poluprovodnikov (CTC) **FTPPA** 

Fizika tverdogo tela (CTC) **FTVTA** 

Gigiyena truda i professional'nyye zabolevaniya **GTPZA** 

Akademiya nauk SSSR. Izvestiya. Seriya IANFA

fizicheskaya (CTC)

**IFAOA** Akademiya nauk SSSR. Izvestiya.

Fizika atmosfery i okeana (CTC)

Inzhenerno-fizicheskiy zhurnal (CTC) INFZA

IUZTA Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya tekhnicheskikh nauk **IVNMA** Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy (CTC) **TVUBA** Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye (CTC) **IVUFA** Izvestiya vysshikh uchebnykh zavedeniy. Fizika (CTC) **IVUSA** Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye **IVUZB** Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika **IVYRA** Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika (CTC) **IVZAA** Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka (CTC) **IZFMB** Akademiya nauk Moldavskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk Akademiya nauk SSSR, Izvestiya. Metally (CTC) IZNMA IZTEA Izmeritel'naya tekhnika (CTC) **JMKOA** Jemna mechanika a optika KHFID Khimicheskaya fizika (CTC) **KHVKA** Khimiya vysokikh energiy (CTC) **KNLTA** Knizhnaya letopis' KRISA Kristallografiya (CTC) **KVEKA** Kvantovaya elektronika (journal, Moskva) (CTC) LFSBA Litovskiy fizicheskiy sbornik (CTC) LZFTA Akademiya nauk Latviyskoy SSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk

Letopis' zhurnal'nykh statey

LZSTA

MGTDA Magyar tudomany

MTRLB Metrologiya

NACHA Nachrichtentechnik-Elektronik (GDR)

OKNOA Okeanologiya (CTC)

OPAPB Optica applicata (Poland)

OPMPA Optiko-mekhanicheskaya promyshlennost' (CTC)

OPSPA Optika i spektroskopiya (CTC)

OTIZD Otkrytiya, izobreteniya (formerly included in OIPOB)

OTPIA Otbor i peredacha informatsii. Fizikomekhanichekiy institut AN UkrSSR.
Respublikanskiy mezhvedomstvennyy sbornik
nauchnykh trudov. Kiyev, Naukova dumka

PFKMD Poverkhnost'. Fizika, khimiya, mekhanika (Moskva)

PNITB Prace naukowe Instytutu technologii elektronowej Politechniki wroclawskiej (Breslau)

PRTEA Pribory i tekhnika eksperimenta (CTC)

PSSAB Physica status solidi (A). Applied Research (GDR)

PSSBB Physica status solidi (B). Basic Research (GDR)

PZTFD Zhurnal tekhnicheskoy fiziki. Pis'ma (CTC)

RADID Nauchnyye trudy vysshikh uchebnykh zavedeniy Litovskoy SSR. Radioelektronika (Kaunas)

RAELA Radiotekhnika i elektronika (journal, Moskva)(CTC)

RATEA Radiotekhnika (journal, Moskva) (CTC)

RELED Radiotekhnika i elektronika (sbornik, Minsk)

RRPQA Revue Roumaine de Physique

RZFZA Referativnyy zhurnal. Fizika

RZGFA Referativnyy zhurnal. Geofizika

RZRAB Referativnyy zhurnal. Radiotekhnika

SAKNA Akademiya nauk Gruzinskoy SSR. Soobshcheniya

SCEFA Studii si cercetari de fizica

SLOZA Slaboproudy obzor

SOMEA Sovetskaya meditsina

SPBAA Spisanie na Bulgarskata Akademiya na Naukite

TEHBA Tehnika (Yugoslavia)

TKMSB Tekhnicheska misul (Sofia)

TKTEA Tekhnika kino i televideniya

TVYTA Teplofizika vysokikh temperatur (CTC)

UFIZA Ukrainskiy fizicheskiy zhurnal (Russian language version) (CTC)

UFNAA Uspekhi fizicheskikh nauk (CTC)

VAFEA Akademiya nauk Belorusskoy SSR. Izvestiya.

Seriya fiziko-energeticheskikh nauk

VBMFA Belorusskiy universitet. Vestnik.

Seriya 1. Matematika, fizika, mekhanika

VBSFA Akademiya nauk Belorusskoy SSR. Izvestiya.

Seriya fiziko-matematicheskikh nauk

VORLA Vestnik otorinolaringologii

VYSAA Vysokomolekulyarnyye soyedineniya.

Seriya A (CTC)

CHARLES THE STATE OF THE STATE

WIFOA Wissenschaft und Fortschritt (GDR)

ZETFA Zhurnal eksperimental'noy i teoreticheskoy

fiziki (CTC)

ZFKHA	Zhurnal fizicheskoy khimii (CTC)
ZFPRA	Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma (CTC)
ZNPFA	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii (CTC)
ZPMFA	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki (CTC)
ZPSBA	Zhurnal prikladnoy spektroskopii (CTC)
ZRBEA	Zarubezhnaya radioelektronika
ZTEFA	Zhurnal tekhnicheskoy fiziki (CTC)
ZUNBA	Zhurnal ushnykh, nosovykh i gorlovykh bolezney
ZVMFA	Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki (CTC)

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BashGU
  Bashkirskiy gosudarstyvennyy universitet
  Bashkir State university
 Bashkirskiy meditsinskiy institut
 Bashkir Medical Institute
 Belorusskiy gos universitet
 Belorussian State University
 Belorusskiy politekhnicheskiy institut
 Belorussian Polytechnical Institute, Minsk
  Chelyabinskiy politekhnicheskiy institut
 Chelyabinsk Politechnical Institute
 Dagestanskiy Gosudarstvennyy Pedagogicheskiy Institut
 Dagestan State Pedagogical Institute
 Dnepropetrovskiy gosudarstvennyy universitet
 Dnepropetrovsk State University
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FIAN
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  Physics Institute imeni Lebedev, Academy of Sciences
    USSR, Moscow
FMIANUkr
  Fiziko-mekhanicheskiy institut AN Ukr SSR
  Physical Mechanical Institute, Academy of Sciences Ukrainian
    SSR, L'vov
 Fiziko-tekhnicheskiy institut im Ioffe AN SSSR
 Physicotechnical Institute im Ioffe, Academy of
    Sciences USSR, Leningrad
FTIANTadzh
 Fiziko-tekhnicheskiy institut AN TadzhSSR
 Physicotechnical Institute, Academy of Sciences
    Tadzhik SSR, Dushanbe
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FTIANUK Fiziko-tekhnicheskiy institut AN UkrSSR Physicotechnical Institute, Academy of Sciences Ukrainian SSR, Khar'kov FTINT Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR Physicotechnical Institute of Low Temperature Physics, Academy of Sciences Ukrainian SSR, Khar'kov GAZ Gor'kovskiy avtomobil'niy zavod Gor'kiy Automobile Plant Gor'kovskiy gos universitet Gor'kiy State University Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut pri Gor'kovskom gos universite Gor'kiy Physicotechnical Research Institute at Gor'kiy State University GNIIKhTES Gos NII khimii i tekhnologii elementoorganicheskikh soyedineniy State Scientific Research Institute of Chemistry and Technology of Organoelemental Compounds GOI Gosudarstvennyy opticheskiy institut im Vavilova State Optical Institute imeni Vavilov, Leningrad IAE Institut atomnoy energii im Kurchatova Institute of Atomic Energy imeni Kurchatov, Moscow IAESOAN Institut avtomatiki i elektrometrii SOAN Institute of Automation and Electronic Measurements, Siberian Branch Academy of Sciences USSR Institut biologicheskoy fiziki AN SSSR Institut of Biological Physics, Academy of Sciences USSR, Pushchino Institut elektrokhimii AN SSSR Institute of Electrochemistry, Academy of Sciences IEM Institut eksperimental'noy meteorologii Institute of Experimental meteorology, Obninsk Institut fiziki AN AzSSR Institute of Physics, Academy of Sciences

Azerbaydzhan SSR

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Institut fiziki AN BSSR

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## **IFANEst**

Institut fiziki AN EstSSR

Institute of Physics, Academy of Sciences Estonian SSR

#### IFANUK

Institut fiziki AN UkrSSR

Institute of Physics, Academy of Sciences Ukrainian SSR, Kiev

## IFI

Institut fizicheskikh issledovaniy AN ArmSSR Institute of Physics Research, Academy of Sciences Armenian SSR

## **IFP**

Institut fizicheskikh problem AN SSSR Institute of Problems of Physics, Academy of Sciences USSR

#### **IFPSOAN**

Institut fiziki poluprovodnikov SOAN
Institute of Semiconductor Physics, Siberian Branch
Academy of Sciences USSR, Novosibirsk

#### IFPV

Institut fiziki poluprovodnikov AN LitSSR Institute of Semiconductor Physics, Academy of Sciences Lithuanian SSR, Vilnius

#### **IFSOAN**

Institut fiziki SOAN

Institute of Physics, Siberian Branch Academy of Sciences USSR, Krasnoyarsk

## IFTT

Institut fiziki tverdogo tela AN SSSR Institute of Solid State Physics, Academy of Sciences USSR, Chernogolovka

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Institut kristarlografii AN SSSR
Institute of Crystallography, Academy of Sciences
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#### IKhF

Institut khimicheskoy fiziki AN SSSR Institute of Physics of Chemistry, Academy of Sciences USSR, Chernogolovka

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Institut metallurgii im Baykova

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IMMGU

Institut mekhaniki Moskovskogo GU

Institute of Mechanics of Moscow State University

INKhS

Institut neftekhimicheskogo sinteza AN SSSR Institute of Petrochemical Synthesis, Academy of Sciences USSR, Moscow

IOA

Institut optiki atmosfery SOAN

Institute of Atmospheric Optics, Siberian Branch Academy of Sciences USSR

IOAN

Institut okeanologii AN SSSR

Institute of Oceanography, Academy of Sciences USSR, Moscow

IOF

Institut obshchey fiziki AN SSSR

Institute of General Physics, Academy of Sciences USSR, Moscow

**IPANUk** 

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IPF

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Institute of Applied Physics, Academy of Sciences USSR, Gor'kiy

**IPFANBel** 

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Institute of Applied Physics, Academy of Sciences Belorussian SSR

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**IPOnk** 

Institut problem onkologii AN UkrSSR

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Institut sinteticheskikh polimernykh materialov AN SSSR, Moscow

Institute of Synthetic Polymer Materials, Academy of Sciences USSR, Moscow

# ITEF

Institut teoreticheskoy i eksperimental'noy fiziki Institute of Theoretical and Experimental Physics, Moscow ITeFUk

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Institut tekhnicheskoy mekhaniki AN UkrSSR
Institute of Engineering Mechanics, Academy of Sciences
Ukrainian SSR, Dnepropetrovsk

#### ITMO

Institut teplo- i massoobmena AN BSSR Institute of Heat and Mass Exchange, Academy of Sciences Belorussian SSR

#### TTPM

Institut teoreticheskoy i prikladnoy mekhaniki SOAN
Institute of Theoretical and Applied Mechanics, Siberian
Branch Academy of Sciences USSR, Novosibirsk

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Institut vysokikh temperatur AN SSSR Institute of High Temperatures, Academy of Sciences USSR

መዘመራ ያያለመለመለመለመለመለመለመለመ የሚያስፋቸው እና ተመው የተፈናቸው እና ለተመቀመ የመጀመር እና የሚያስፋቸው ለመፈር እና የሚያስፋቸው ለመፈር እና የሚያስፋቸው እና ለመ

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Leningradskiy gos universitet Leningrad State University

LGU

LPI Leningradskiy politekhnicheskiy institut Leningrad Polytechnic Institute L'vovskiy politekhnicheskiy institut L'vov Polytechnic Institute Moskovskiy aviatsionnyy tekhnologicheskiy institut Moscow Aviation Technical Institute MEIS Moskovskiy elektrotekhnicheskiy institut svyazi Moscow Electrotechnical Institute of Communications Moskovskiy fiziko-tekhnicheskiy institut Moscow Physicotechnical Institute Moskovskiy gos universitet Moscow State University Moskovskiy inzhenerno-fizicheskiy institut Moscow Engineering Physics Institute MIREA Moskovskiy institut radiotekhniki, elektroniki i avtomatiki Moscow Institute of Radio Engineering, Electronics and Automation MISIS Moskovskiy institut stali i splavov Moscow Institute of Steel and Alloys MITKhT Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova Moscow Institute of Fine Chemical Technology imeni Lomonosov Moskovskiy institut upravleniya im Ordzhonikidze Moscow Institute of Control imeni Ordzhonikidze Moskovskiy oblastnoy pedagogicheskiy institut im. N.K. Krupskoy Moscow Oblast Pedagogical Institute im. N.K. Krupskaya MRI Minskiy radiotekhnicheskiy institut Minsk Radio Engineering Institute MVTU

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## NGU

Novosibirskiy gos universitet Novosibirsk State University

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NII mekhaniki i fiziki Saratovskogo GU Scientific Research Institute of Mechanics and Physics of Saratov State University

## MIIPFP

NII prikladnykh fizicheskikh problem pri Belorusskom gos universitete

Scientific Research Institute of Applied Physics Problems at Belorussian State University

## NIIYaF

NII yadernoy fiziki pri Moskovskom gos universitete Scientific Research Institute of Nuclear Physics at Moscow State University

# NIKFI

NI kinofotoinstitut

Scientific Research Institute of Motion Pictures and Photography, Moscow

#### NIOPIK

NII organicheskikh poluproduktov i krasiteley Scientific Research Institute of Organic Intermediates and Dyes, Moscow

#### NITSTLAN

NT tsentr po tekhnologicheskim lazeram AN SSSR Scientific Research Center for Industrial Lasers, Academy of Sciences USSR

NovqPI Novgorodskiy politekhnicheskiy institut Novgorod Polytechnic Institute Nauchno-proizvodstvennoye ob yedineniye kosmicheskikh issledovaniy AN AzSSR Scientific Production Association of Space Research, Academy of Sciences Azerbaydzhan SSR, Baku **NSPGAN** Nauchnyy sovet AN 3SSR po probleme "Golografiya" Scientific Council on Holography, Academy of Sciences USSR Odesskiy gos universitet Odessa State University Ob"yedinennyy institut yadernykh issledovaniy Joint Institute of Nuclear Research, Dubna ONIITEkhim Otdeleniye NII tekhniko-ekonomicheskikh issledovaniy khimicheskoy promyshlennosti Department of Scientific Research Institute of Technical Economic Studies of the Chemical Industry, Cherkassy OOFA Otdeleniye obshchey fiziki i astronomii AN SSSR Department of General Physics and Astronomy, Academy of Sciences USSR, Moscow PetGU Petrozavodskiy gos universitet Petrozavodsk State University Pervyy Moskovskiy meditsinskiy institut im Sechenova First Moscow Medical Institut imeni Sechenov Sibirskiy fiziko-tekhnicheskiy institut im Kuznetsova Siberian Physicotechnical Institute imeni Kuznetsov, Tomsk Sverdlovskiy gornyy institut Sverdlovsk Mining Institute SKBOptika Spetsial'noye konstruktorskoye byuro nauchnogo priborostroyeniya "Optika" SOAN "Optika" Special Design Bureau for Scientific Instrument Manufacture, Siberian Branch Academy

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SKTBSEAP SKTB spetsialnoy elektroniki i analiticheskogo priborostroyeniya, SOAN SSSR, Novosibirsk Special Design and Technology Bureau for Specialized Electronics and Analytical Instrument Manufacture, Siberian Branch Academy of Sciences USSR, Novosibirsk TashGU Tashkentskiy gos universitet Tashkent State University Tbilisskiy gos universitet Tbilisi State University TOI Tikhookeanskiy okeanologicheskiy institut Dal'nevostochnogo nauchnogo tsentra AN SSSR Pacific Oceanographic Institute, Far Eastern Scientific Center, Academy of Sciences USSR, Vladivostok TsNIITEIpriboro TsNII informatsii i tekhniko-ekonomicheskikh issledovaniy priborostroyeniya, sredstv avtomatizatsii i sistem upravleniya Central Scientific Research Institute of Information and Technical Economic Studies on Instrument Manufacture, Means of Automation, and Control Systems, Moscow Tul'skiy politekhnicheskiy institut Tula Polytechnic Institute Universitet druzhby narodov im Lumumby University of Friendship Among Peoples imeni Lumumba, Moscow Ukrainskiy NII nauchno-tekhnicheskoy informatsii i tekhniko-ekonomicheskikh issledovaniy Gosplana Ukrainian Scientific Research Institute of Scientific and Technical Information and of Technical Economic Studies for the State Plan of the Ukrainian SSR, Kiev Uzhgorodskiy gos universitet Uzhqorod State University VGNIPIKFP Vsesoyuznyy gos NI i proyektnyy institut fizikofotograficheskoy promyshlennosti All-Union State Scientific Research and Planning

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